RED, BLUE, AND GREEN: DETERMINING ENVIRONMENTAL ORIENTATION ON THE UNIVERSITY OF MISSISSIPPI CAMPUS

By

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A thesis submitted to the faculty of The University of Mississippi in partial fulfillment of the requirements of the Sally McDonnell Barksdale Honors College.

Oxford, MS

May 2015

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THANK YOU,

To Dr. David Rutherford,

For your patient guidance and interest in my subject. Your wisdom and your knowledge (for these are two *very different* things) have been indispensable in the completion of this project.

To Shellye McDonald,

My mother, for instilling in me a sense of curiosity and social responsibility, and for encouraging me to set my goals high.

To Anne McCauley,

For serving as a leader and role model in sustainability. I, and so many others, learn and grow by striving to meet your example.

ABSTRACT

KENDALL LANE MCDONALD: Red, Blue, and Green: Determining Environmental Orientation on the University of Mississippi Campus
(Under the direction of David Rutherford)

The goal of this research was to identify and begin to understand the environmental attitudes and behaviors of students, faculty, and staff at the University of Mississippi. This study employed a quantitative survey approach. The survey consisted of the Revised New Ecological Paradigm scale to measure environmental attitudes, and a lifestyle questionnaire to gauge self-reported sustainability behaviors and relationship with the natural world. This survey was broadcasted to all within the University of Mississippi's email listserv. Responses were analyzed using descriptive statistics, means comparisons, and independent samples t-tests. Major findings included: women reported more pro-ecological responses than men in all three categories (students, faculty, and staff); faculty reported more pro-ecological responses versus students and staff; students reported the least pro-ecological responses; conservatives were less likely to be pro-ecological in their responses than liberals. Campus culture is moderately pro-ecological in its attitudes, but report relatively low commitment to sustainable behaviors. Campus culture values the outdoors and outdoor recreational activities. Understanding of these attitudes is vital for the growth of sustainability and environmentalism at the University of Mississippi.

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CHAPTER 1

INTRODUCTION

Introduction to Sustainability at the University of Mississippi

Sustainability is a growing focus on today's college campuses (Princeton Review, 2013; AASHE, 2014; ACUPCC, 2015). On the campus of the University of Mississippi, sustainability efforts are relatively young—many of the campus sustainability programs having their beginnings as recently as 2009—but they are on the rise. These programs have seen steady increases in their effectiveness and reach within the student population since their inception, but these increases have been small and painstaking to achieve (Anne McCauley, personal communication, March, 2015).

Rationale.

For sustainability to move forward at the University of Mississippi, those pursuing such efforts need greater understanding of the attitudes that members of the university community hold towards environmentalism and the lifestyle changes it requires. Environmental attitudes and attitudes towards sustainability at the University of Mississippi have yet to be examined, and it is still unknown if low participation in sustainability initiatives is due to negative attitudes towards the environment,

sustainability, or a general misunderstanding of the issues and/or prescribed solutions. Furthermore, it is not understood how attitudes change in respect to year in school, level of education, gender of student, political affiliation, or other demographic identifiers.

In this Study:

This study aims to understand campus culture towards environmental issues. The results of this study will help to clarify some key assumptions that underlie campus behavior with respect to sustainability, and identify obstacles in furthering the on-campus sustainability movement. This study fulfilled this aim through a quantitative survey approach, utilizing a pre-existing survey methodology called the Revised NEP along with a lifestyle questionnaire. The results of the survey were then analyzed in order to create a series of recommendations for the future development of sustainability and environmental efforts at the University of Mississippi.

CHAPTER 2

LITERATURE REVIEW

Introduction: The Roots of Sustainability Planted in Higher Education

The Intergovernmental Panel on Climate Change (IPCC), a scientific intergovernmental body under the sponsorship of the United Nations, has issued definitive support for the anthropogenic cause of global climate change. In their 5th Assessment Report, issued in 2014, the IPCC found that global climate change is "unequivocal," that "atmospheric concentrations of carbon dioxide, methane, and nitrous oxide have increased to levels unprecedented in at least the last 800,000 years," and that much of cause of these increases find their origins in human activities (IPCC, 2014, p. 1069). This is one example of many that shows the global concern for environmental issues and sustainability that has grown significantly over the past decade.

Colleges and universities, already often the sources and incubators for societal change, are far from immune to growing concern for environmental impact. Because of growing environmental concern, the sustainability movement in higher education has seen tremendous growth in recent years. In 2008, Congress passed the Higher Education Opportunity Act, which approved plans for a "University Sustainability Program" at the Department of Education. This program would create competitive grant opportunities for

institutions of higher education to design and implement programs of study that focus on sustainability and environmental issues (AASHE, 2014). This program also created grant opportunities to institutions of higher education that seek to develop offices of sustainability, or other means of integrating sustainability into the fabric of the institution (AASHE, 2014). Just one year earlier, Congress passed The Energy Independence and Security Act of 2007, which authorized $250 million annually in grants and $500 million in loans for universities and colleges to implement plans for renewable energy and energy efficiency projects (AASHE, 2014).

Beyond these sources of public funding, it is also worth mentioning that many higher education associations have implemented programs that promote sustainability as a part of the fabric of their core values. A list of these associations can be found in **Table 2.1**. The Association for the Advancement of Sustainability in Higher Education (AASHE), a continuously growing organization with increasing influence in the higher education world, notes that over 700 campuses have conducted campus sustainability assessments (many within the past 5 years), and hundreds more are planning to conduct them (AASHE, 2014). Out of these 700, as many as 550 have designated coordinators or directors of sustainability at those campuses (AASHE, 2014). Another significant step for any institution pursuing greater organizational sustainability (and a lesser carbon footprint) is the signing of the American College and University Presidents Climate Commitment (ACUPCC). The ACUPCC is, in its own words, a commitment to "a high-visibility effort to address global climate disruption undertaken by a network of colleges and universities that have made institutional commitments to eliminate net greenhouse gas emissions from specified campus operations" (ACUPCC, 2015). Signage of the

ACUPCC is generally followed by a rigorous period of research, goal-setting, and deliberate implementation of new institutional policy and periodic assessments. As of March of 2015, nearly 700 institutions have signed the ACUPCC, a significant increase in participating institutions since the commitment's inception in late 2006 (ACUPCC, 2015).

Table 2.1. Higher Education Associations with Sustainability Programs

American Association of Community Colleges	AACC
American Association of State Colleges & Universities	AASCU
American Council on Education	ACE
College Student Educators International	CSEI
Association of Physical Plant Administrators	APPA
Association of College & University Housing Officers-International	ACUHO-I
Association of Governing Boards of Universities & Colleges	AGB
National Association of Independent Colleges & Universities	NAICU
National Association of College and University Business Officers	NACUBO
National Association of Educational Procurement	NAEP
National Intramural-Recreational Sports Association	NIRSA
Society of College and University Planners	SCUP
National Association of Independent Colleges & Universities	NAICU

Colleges and universities in the southeastern United States have not escaped this growing trend. According to the Princeton Review, nearly 60 colleges and universities in the southeastern United States have implemented sustainability programs (2013). Each

state in the region has at least one school with a sustainability program (Princeton Review, 2013).

The University of Mississippi Joins the Sustainability Movement

The University of Mississippi joined the sustainability movement not long after the ACUPCC's inauguration. In 2007, after much advocacy by key staff components of the University of Mississippi, Chancellor Robert Khayat (now Chancellor Emeritus) signed the ACUPCC, setting the university's sustainability journey on its course. The Office of Sustainability would be created not long after, in 2008. In 2014, Chancellor Dan Jones would again sign the ACUPCC for the University of Mississippi as a recommitment to sustainability, climate neutrality, and as a means to initiate plans of expansion of the Office of Sustainability and its related initiatives. Chancellor Jones was quoted saying that as the University of Mississippi "[makes] an impact on our state," it also "[has] negative effects on the environment, on the Earth. This is simply a commitment to joining with lots of other universities in saying we want to be the best stewards we can be," a reference to the university's Creed which calls for good stewardship of resources (Newsom, 2014).

Anne McCauley, the university's first full-time staff hire for the Office of Sustainability, oversees the program as the current Assistant Director. According to McCauley, the Office of Sustainability has undergone tremendous growth and change in recent years. In 2012, the Office transitioned to new leadership with Ian Banner taking on the role of Director (a role previously held by Jim Morrison, who also oversaw the Office of Strategic Planning at the time) (Anne McCauley, personal communication,

March, 2015). Ian Banner is also the Director of Facilities Planning and the University Architect, formalizing an important relationship between the Office of Sustainability and these two university entities. McCauley adds that in the summer of 2014, two new full-time positions were created for the Office of Sustainability (Anne McCauley, personal communication, March, 2015).

Programs that fall under the Office of Sustainability's oversight include the football tailgate recycling initiative, *Green Grove*, which has grown from a fledgling group of volunteers conducting outreach in the Grove during football games to a nearly fully institutionalized program, marked by a healthy partnership with the Athletics Department and Athletic Director Ross Bjork. The Office of Sustainability also oversees the University of Mississippi's composting project, which takes food waste from the Residential College and other locations on campus and composts them for use by Landscape Services.

The composting project, among other projects, arose out of a proposal submitted to what is called the Green Fund. The Green Fund is also a product of growing concern for sustainability issues on the campus of the University of Mississippi. It began officially in 2013, but has its roots in years of student organization and campaigning. The idea seemed "fairly radical" to community members at the time, although Green Funds are already established practices at various universities and colleges throughout the country (Anne McCauley, personal communication, March, 2015). The Green Fund is a "pool of money dedicated for sustainability projects on campus" (Anne McCauley, personal communication, March, 2015). The University of Mississippi currently contributes $15,000 per year to the Green Fund, which is combined with accumulated

donations by students, faculty, staff, and alumni. Members of the University of Mississippi community can also contribute Green Fund proposals, which are evaluated by the Green Fund Committee, which consists of five students, two staff members, and two faculty members (Anne McCauley, personal communication, March, 2015).

Additionally, the Office of Sustainability has recently assembled the Sustainability Broad Council. The Sustainability Broad Council pulls voices from departments and offices all over campus. It includes a diverse array of representatives from the UM Foundation, Dining Services, Athletics, Alumni Affairs as well as the Departments of Student Affairs, Administration and Finance, Provost's Office, Faculty Senate and Staff Council. According to McCauley, the Sustainability Broad Council was formed to "further institutionalize sustainability at [The University of Mississippi]," and implement key sustainability initiatives that are "woven throughout" UM 2020 (the UM strategic plan) and the Campus Master Plan (Anne McCauley, personal communication, March, 2015). McCauley believes a Climate Action Plan is on the horizon for the Sustainability Broad Council. She says this policy would be structured in a way to provide additional insight into the progress of sustainability at the University of Mississippi (Anne McCauley, personal communication, March, 2015).

When asked if she believes a shift in perspective towards sustainability is taking place on campus, Anne McCauley responded that "absolutely" she does. McCauley believes that although some may still be apprehensive of sustainability on campus at the University of Mississippi, a "de-politicization" is taking place and people are less "combative" or "defensive" than they may have been in the past when encouraged to think about their environmental impact or recycle (Anne McCauley, personal

communication, March, 2015). In addition to a shift in attitudes towards sustainability, McCauley also believes there has been a shift in attitudes towards greater acceptance of climate science that supports anthropogenic global climate disruption:

> [When] I first started, we would not dare bring up climate change for fear of alienating people. Now we are talking about it much more freely. There was even a presentation on [climate change] science during the first Broad Council meeting. (Anne McCauley, personal communication, March, 2015)

Although anecdotal, it does seem that with the growth in institutional support for sustainability, concern for environmental impact is becoming more of a priority at the University of Mississippi, among both administration *and* students of the university. Moreover, policy priorities at a university are shaped by the concerns and interests of its students and other constituents, and McCauley believes that greater understanding of the perspectives held by students, staff, and faculty towards these issues provides important contextualization of the Office of Sustainability's efforts to reach new audiences.

Research Hypotheses

Hypothesis 1: Education Correlates with Environmental Sustainability

In preliminary studies of environmental attitudes, a correlation appears in regards to age, educational attainment, and interest in environmental sustainability and issues. For example, in validity testing of the Revised New Ecological Paradigm Scale (one of the survey instruments used in this study), the scale's authors found a correlation between increased education (particularly the attainment of a doctoral degree) and generally

strengthened pro-ecological quality of responses of survey participants (Dunlap et. al, 2000). This is also true of many other studies of environmental attitudes (Harraway et. al., 2012; Nesbit et. al., 2009). It is unclear where this correlation arises from, or whether it is meaningful in any policy-focused context.

However, the variation among individuals with different educational attainment provides a potentially useful baseline for analysis. It is apparent that these groups operate in different ideological spheres—groupings that can be studied independently of one another, while also forming a whole (in the context of a university community). Due to this observation, this thesis will anticipate a measurable difference in the environmental attitudes of students, faculty, and staff. As a result of the information gathered from the literature, this study expects that faculty will hold the most pro-ecological views out of the three categories. It then follows that students will hold the least pro-ecological views out of the three categories.

Hypothesis 2: Gender Correlates with Environmental Sustainability

Another correlation appears when examining environmental attitudes in terms of gender. In the literature, it is common for women to present stronger pro-ecological attitudes than men. For example, in the study of Washington State students conducted to test the Revised NEP for internal consistency, female students were also found to be more pro-ecological in their statements than male students (Dunlap et. al., 2000). In a New Zealand study determining whether or not the Revised NEP was an appropriate survey methodology for use upon college students, female students were again more pro-ecological than their male peers in response to the prompts (Harraway, 2012). In 2000, a

substantial literature review was conducted into the attitudinal differences between males and females in regards to environmental issues; this study identified thirteen major studies of environmental attitudes where female respondents were more pro-ecological in their responses than male respondents (Zelezny et. al., 2000). Many of these studies utilized the Revised NEP, or the original New Environmental Paradigm Scale (Zelezny, et. al., 2000).

It is unclear whether the difference in environmental engagement among men and women is merely correlation or a substantive difference. It is also unclear what causes the difference between men and women in terms of their ecological worldviews. In the aforementioned study into the documented differences between women and men in environmental attitudes, the authors conducted an additional study into the environmental attitudes of male versus female children and found the difference to exist at a young age, "debunking the argument that gender differences in environmentalism arise with motherhood and protecting children from environmental threats" (Zelezny, et. al., 2000). In their conclusion, the authors of this study considered the possibility that the difference in methods of socialization between developing female and male children produced the contrast (Zelezny, et. al., 2000).

Because of this contrast, one that is well-supported in the literature, it would be appropriate to structure an analysis of environmental attitudes to specifically address potential differences among men and women. This thesis will anticipate and record differences among women and men in their environmental attitudes and beliefs. This study expects that women at the University of Mississippi will hold measurably more pro-ecological views than men.

Hypothesis 3: Political Affiliation Correlates with Environmental Sustainability

The University of Mississippi is experiencing ever-increasing growth in all directions, including the out-of-state student population in relationship to the in-state student population. In fall of 2014, out-of-state students accounted for over 40% of undergraduate freshman enrollment ("Mini Fact-Book," 2014). Many of these out-of-state students are from the southeastern United States, often even states that border Mississippi ("Mini Fact-Book," 2014). Even with many students attending the University of Mississippi from states outside of the South, Southern culture and sentiment pervade campus fabric. There is no way to study campus perspectives at the University of Mississippi on *any* issue without considering the unique regional context in which this university is embedded. This unique context includes political identity of the Southeast and of Mississippi.

According to Gallup's "State of the States," the Southeast contains many of the most conservative states in the country (highest percent reporting conservative political beliefs) (Gallup, 2014). Mississippi is the most conservative state; Alabama, Louisiana, Arkansas, and Tennessee scored similarly (**See Figure 2.1)** (Gallup, 2014). Mississippi had the second lowest percentage of respondents identifying as liberal, with Alabama, Arkansas, Tennessee, and Louisiana all scoring with similarly low percentages of liberally identifying respondents (Gallup, 2014) (**See Figure 2.2).**

Figure 2.1. Percent Conservative Respondents (by state), State of the States (Gallup 2014).

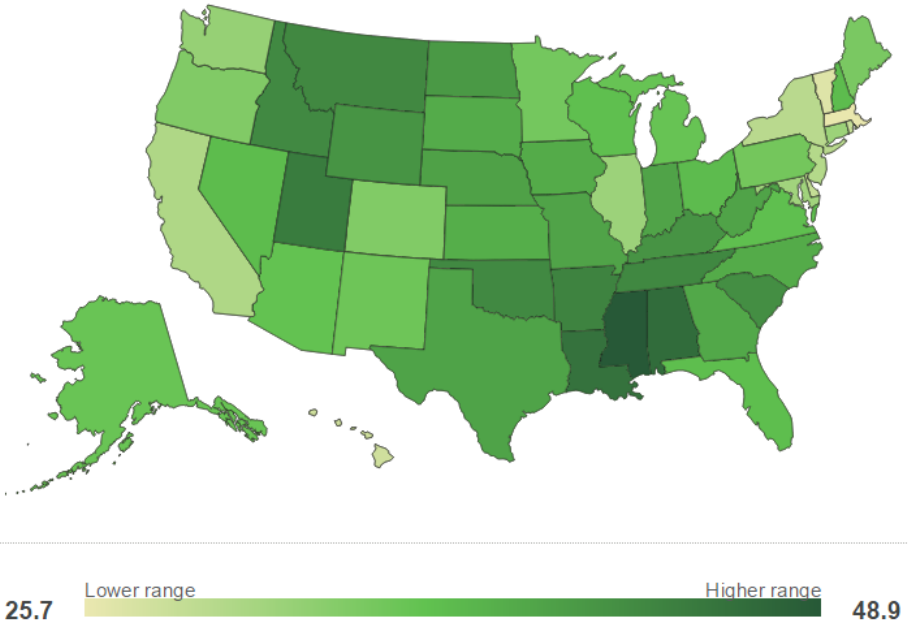
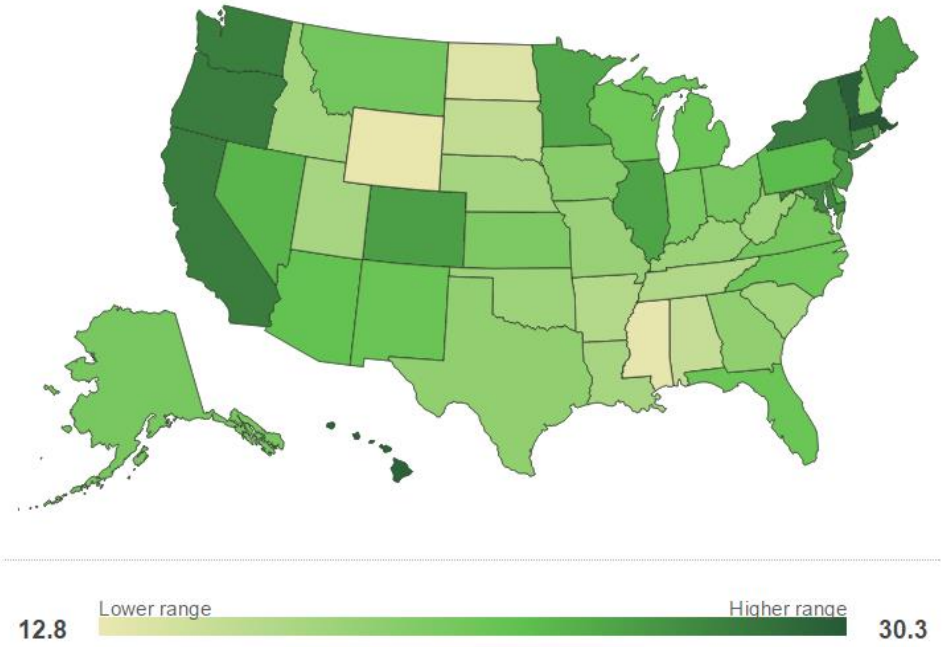


Figure 2.2. Percent Liberal Respondents (by state), State of the States (Gallup 2014).

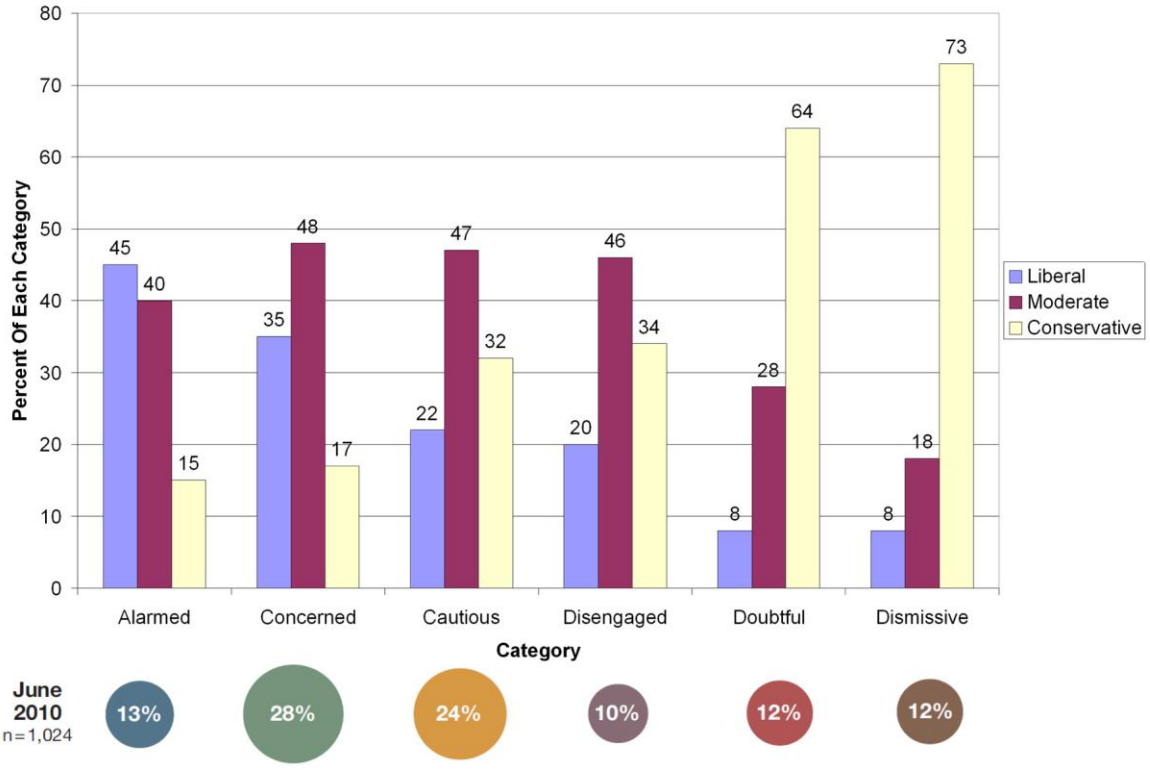


In June of 2010, Yale University and George Mason University teamed together to study perceptions of Americans towards climate change and associated environmental issues. The resulting study was named "Global Warming's Six Americas," as the researchers found that respondents fell into six categories, depending on their level of acceptance of climate change science. Respondents could be *alarmed, concerned,* or *cautious* of global warming, depending on how concerned and motivated they were by climate change science, and respondents that were least concerned and motivated fell into the categories of *disengaged, doubtful,* or *dismissive* (Leiserowitz, et. al.,2010). When respondents were asked about their political preferences, they found that those who were *doubtful* or *dismissive* were much more likely to identify themselves as politically conservative, with the *dismissive* category the most likely to identify themselves as part of the Tea Party movement (40%). Those who fell into the *alarmed* or *concerned* categories were more likely to also identify as politically liberal. They were unlikely to identify as politically conservative, and much less likely to identify as part of the Tea Party movement (See **Figure 2.3)** (Leiserowitz, et. al.,2010).

There are many individuals that identify as politically conservative at the University of Mississippi; this could potentially influence the environmental beliefs and behaviors of this community. As demonstrated in the literature, it is important to study environmental attitudes in relationship to political beliefs to identify whether or not this could potentially be an obstacle to sustainability on campus. In regards to this study, the analysis will be structured to illustrate potential differences among political affiliations in regards to environmental beliefs and attitudes. This study anticipates that those identifying as liberal will hold the strongest pro-ecological views while those identifying

as conservative will hold the weakest pro-ecological views.

Figure 2.3. Political ideology of Global Warming's Six Americas (Leiserowitz, et. al.,2010)



Survey Instruments

The Revised New Ecological Paradigm Scale

In studying environmental attitudes, it is particularly important that the instrument used is appropriate and accurate. For this study, the Revised New Ecological Paradigm Scale was chosen. The Revised New Ecological Paradigm Scale has a long history of use, and was born out of the New Environmental Paradigm (NEP).

The New Environmental Paradigm, a survey methodology constructed in the mid-1970s to measure environmental attitudes, was originally developed as a reaction to the "dominant social paradigm"—a worldview that holds that humans are superior to other all other species, the Earth provides unlimited resources for humans, and that progress is an inherent part of human history (Pirages, et. al.,1974; Dunlap et. al., 1974). The New Environmental Paradigm "focus[ed] on beliefs about humanity's ability to upset the balance of nature, the existence of limits to growth for human societies, and humanity's right to rule over the rest of nature" (Dunlap and Van Liere, 1974). The New Environmental Paradigm saw extensive use after its creation. A 1984 Washington State study by the authors of the scale found that the original NEP exhibited strong internal consistency (a coefficient alpha of .81) and definitively differentiated between known environmentalist respondents and the general public (Dunlap et. al., 2000). They felt this supported the argument that the items of the New Environmental Paradigm Scale could be legitimately used to measure environmental perspectives, and that "endorsement of the NEP was, as expected, negatively related to endorsement of the DSP (Dominant Social Paragigm)" (Dunlap et. al., 2000).

In 1990, Dunlap and Van Liere updated the scale, renaming it the Revised New Ecological Paradigm Scale (Revised NEP). The Revised NEP was "designed to improve upon the original one in several respects: (1) It taps a wider range of facets of an ecological worldview, (2) It offers a balanced set of pro- and anti-NEP items, and (3) It avoids outmoded terminology" (Dunlap et. al., 2000). The revised scale consists of fifteen items, which were confirmed to be legitimately used together as one complete instrument with high internal consistency (Dunlap et. al., 2000).

The Revised NEP has since been extensively used to measure environmental attitudes of various populations, including those of college students. In 2010, a study was conducted to determine if the Revised NEP was an appropriate tool for use on college campuses; it found that the Revised NEP could be insightful for this particular research situation (Harraway, 2012). The study recommended the Revised NEP as a means to assist in "reaching conclusions about which are reasonable educational objectives and which are not. Some institutions may have no particular agreed objectives for students' sustainability attitudes" (Harraway, 2012). Furthermore, the study found that university teachers gained useful feedback from the Revised NEP in instances where it was implemented on students (Harraway, 2012).

The Nature-Relatedness Scale

Since the conception of the Revised NEP, new studies have attempted to either build upon Dunlap and Van Liere's methodology or replace it with other instruments. Although the Revised NEP remains the most successful survey instrument for this particular end, other studies have managed to expand available tools for understanding environmental attitudes. In 2009, researchers at Carleton University posited a framework for understanding a lack of motivation to engage in sustainability as a manifestation of disconnect between individuals and the natural world. They created a survey methodology called the Nature-Relatedness Scale, which attempts to identify the relationship (if any) with nature enjoyed by respondents (Nesbit, 2009). This particular instrument asks a series of questions that target the comfort of respondents in nature, engaging in outdoor recreational activities, and their participation in environmental protection or conservation activities or practices (Nesbit, 2009). The authors found that

there was a positive relationship between the two characteristics, but that this relationship needed to be explored further (Nesbit, 2009).

Research Definitions

For the purposes of my research, I have synthesized the following definition of sustainability from definitions constructed by three prominent and influential sources: the United Nations Brundtland Report, the Environmental Protection Agency, and Basiago's *Defining Methods of Sustainability* (1995). The definition is as follows:

> Sustainability creates and maintains conditions under which humans can exist within—and not contrary to—healthy, thriving ecosystems; a sustainable system permits fulfillment of the social, economic and ecological requirements of the present generation while allowing future generations to similarly thrive.

This definition is the aggregate of three different sources, from whom I have retained the strengths and attempted to correct the weaknesses. The first is that of the Brundtland Report, otherwise known as "Our Common Future" (WCED, 1987). This report was issued in 1987 by the Brundtland Commission, a group created by the UN General Assembly to rally countries to work and pursue sustainable development together. The Brundtland Report defines "sustainable development" as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED, 1987). The Brundtland Report's vision has since provided a conceptual baseline for discussion of sustainability. It introduced the idea of *futurity*—the policy actions we take now will have significant impact on the well-being of future generations. The Brundtland definition highlights an important temporal dimension of

sustainability, differentiating it from policy concepts that provide more instantaneous rewards.

However, this definition has attracted serious criticism since its first use in 1987. The use of the term "development" has been deemed overtly growth-centric, more concerned with economic needs over others (Basiago, 1995). The Brundtland definition represents an anthropocentric attitude towards sustainability, taking into consideration only the needs of humans as opposed to ecosystems. Another primary concern with this definition is its vagueness (Basiago, 1995). What needs are being referred to? What are the criteria for something to be considered a "need?" In consideration of these limitations, I also drew from the EPA's model, which describes sustainability as "creat[ing] and maintain[ing] the conditions under which humans and nature can exist in productive harmony, that permit fulfilling the social, economic and other requirements of present and future generations," (EPA, 2014). This definition more explicitly defines the needs, or "requirements," that sustainability must provide for, giving three categories for these needs: social, economic, and a catch-all for other needs. However, this definition still fails to escape the pitfall of ambiguity in not elaborating what is meant by "other needs." There is a notable absence of ecological consideration in both the EPA and Brundtland definitions, rendering them critically vulnerable to accusations of anthropocentrism.

Consequently, I drew heavily from Basiago, who develops a thorough explanation of different aspects of sustainability. Basiago elucidates the issues of environmental justice that underlie principles of sustainability and necessitate the inclusion of economic and sociological requirements. He states that sustainability must be evaluated through

the application of four criteria—futurity, equity, global environmentalism and biodiversity (Basiago, 1995). He says that sustainability implies that "humanity will only succeed in a cosmic sense if it finds a way to meet human needs, while at the same time maintaining the integrity of biological systems, accounting for the loss of natural resources from the economy, working social equity, regenerating human settlements and conserving natural capital," (Basiago, 1995). As Basiago also explains, this definition describes sustainability as more of a process than a destination—a way of doing things, rather than a tangible solution in itself (Basiago, 1995). This method of approaching sustainability aligns itself with systems theory—a conceptual framework that views issues as parts of an overall system, rather than reacting to specific parts, outcomes or events and potentially contributing to further development of unintended consequences. Sustainability should then be defined in terms of describing the complex systemic interactions between a society and the natural environment it calls home. Thus, the developed definition presents sustainability as such a continuing system, rather than an end-product of any one policy or groups of policies.

This study focuses specifically on the attitudes, orientations, or mindsets of student, faculty, and staff members of the University of Mississippi community. Attitudes or mindsets are generally understood as "the enduring positive or negative feeling about some person, object, or issue" (Kollmus et. al., 2002). Pro-ecological attitudes are therefore understood for the purposes of this study as those that reflect interest for the nonhuman (ecological) other, and includes biomes, ecosystems, resources, and the environment broadly conceived. This study consistently used "pro-ecological" attitudes and behaviors to describe sustainable responses because "pro-ecological" is the

term used in Dunlap and Van Liere's original 1990 article to discuss results of the Revised New Ecological Paradigm Scale.

CHAPTER 3

RESEARCH DESIGN

Rationale

This study implements a survey methodology to gain insight on the environmental attitudes and behaviors of members of the University of Mississippi community. A quantitative survey methodology was chosen because of its unique ability to yield information from a large group of people. As the inaugural study on environmental attitudes at the University of Mississippi, this project aimed to collect general, introductory insights into the subject area. By utilizing a survey methodology, this study was able to examine environmental attitudes at the University of Mississippi on a broad scale. This wide-view perspective will allow future research to make informed, intelligent decisions on more specific pathways of inquiry.

Survey Design

This is a two-part quantitative study of environmental attitudes and behaviors of students, faculty, and staff members. The first part of this study measures the attitudes of students, faculty, and staff towards the environment and its relationship to humans. The second part of this study aims to illustrate the direct relationship between members of this community and the natural world, as understood through their daily activities. In order to

clearly delineate between these two aspects of the study, the survey was divided into the two following parts.

Part 1. The Revised New Ecological Paradigm scale.

The first part of the survey consists of the pre-existing, heavily tested survey instrument Revised New Ecological Paradigm Scale (Revised NEP) survey. The fifteen strongly worded statements of the Revised NEP alternate pro-ecological and anti-ecological sentiments. Respondents signify a level of agreement or disagreement on a 5 point Likert scale, with 1=Strong Agreement and 5=Strong Disagreement.

The Revised NEP originated from the New Environmental Paradigm that focused on three facets of environmental awareness: the balance of nature, limits to growth, and anti-anthropocentrism (Dunlap et. al., 2000). For the Revised New Ecological Paradigm, the authors wanted to expand these core facets to include an awareness of the pervasive yet destructive idea of "human exemptionalism," which Dunlap and Van Liere explain as the idea that humans "are exempt from the constraints of nature" through their abilities of reason and their access to technology (Dunlap et. al., 2000). The authors of the Revised NEP also wanted the new instrument to give insight on an additional facet of environmental awareness, one that had only emerged in recent years through greater instances of environmental catastrophe. The concept of "eco-crises" taps into an awareness of emergent environmental issues, such as ozone depletion, climate change, and anthropogenic habitat loss (Dunlap et. al., 2000). Items were included in the Revised NEP to address this facet as well. See **Table 3.1** for the complete list of Revised NEP questions.

For each of five hypothesized facets, three items of the Revised NEP were designed and included: the reality of limits to growth (1, 6, 11), anti-anthropocentrism (2, 7, 12), the fragility of nature's balance (3, 8, 13), rejection of exemptionalism (4, 9, 14) and the possibility of an eco-crisis (5, 10, 15). The eight odd-numbered items were worded so that agreement indicates a pro-ecological view, and the seven even-numbered ones so that disagreement indicates a pro-ecological worldview.

Table 3.1. Revised New Ecological Paradigm Questions.

Revised NEP Questions
1. *We are approaching the limit of the number of people the earth can support*
2. *Humans have the right to modify the natural environment to suit their needs.*
3. *When humans interfere with nature it often produces disastrous consequences.*
4. *Human ingenuity will ensure that we do not make the earth unlivable.*
5. *Humans are severely abusing the environment.*
6. *The earth has plenty of natural resources if we just learn how to develop them.*
7. *Plants and animals have as much right as humans to exist.*
8. *The balance of nature is strong enough to cope with the impacts of modern industrial nations.*
9. *Despite their special abilities humans are still subject to the laws of nature.*
10. *The so-called "ecological crisis" facing humankind has been greatly exaggerated.*
11. *The earth is like a spaceship with very limited room and resources.*
12. *Humans are meant to rule over the rest of nature.*
13. *The balance of nature is very delicate and easily upset.*
14. *Humans will eventually learn enough about how nature works to be able to control it.*
15. *If things continue on their present course we will soon experience a major ecological catastrophe.*

Part 2. Lifestyle questionnaire.

The second part of the survey, aimed at determining the relationship between respondents and the nonhuman environment through their daily activities, resembles a lifestyle questionnaire. The items of this section drew from those used in Nesbit's

"Nature-Relatedness" study, where respondents were asked about their participation in outdoor activities and comfort in the outdoors. This portion of the survey aims to gain insight about the extent to which students, staff, and faculty feel connected to the natural environment. It is also useful in identifying potential avenues for outreach for promotion of sustainability (i.e. using outdoor recreation as a tool to engage new audiences). See **Table 3.2.** for a list of these outdoor activities-related questions.

Table 3.2. Lifestyle Questionnaire, Nature and Outdoors Questions.

Lifestyle Questionnaire, Items 1-4.	
1.	*I voluntarily participate in and enjoy outdoor recreational activities (camping, hunting, fishing, hiking, boating, etc.) often.*
2.	*I enjoy being outdoors.*
3.	*Typically, I do not voluntarily engage in outdoor recreational activities (camping, hunting, fishing, hiking, boating, etc.).*
4.	*The thought of being outdoors, disconnected from civilization, is uncomfortable to me.*

As a component of Part 2, this survey also aimed to determine the extent to which survey respondents identified their daily behaviors as sustainable or unsustainable. Instead of asking directly how often respondents participated in particular activities, such as recycling or public transportation, this study was more interested in identifying how respondents *perceived* their role in sustainability. As such, the lifestyle questionnaire utilizes two questions from a previous honors thesis—that of Jim Burt, graduate of the University of Mississippi in 2014 (Burt, 2014). Burt's thesis explored the environmental attitudes held by evangelical Christians in the South (Burt, 2014). In a survey he conducted, respondents were asked about their role in protecting the environment and whether or not they believed it was *limited* (requiring little additional effort) or

substantial (requiring a restructuring of one's daily routine), if any (Burt, 2014). These questions are important to the present study because they allow respondents to indicate how they prioritize sustainability in their decision-making and whether or not they feel their daily lives reflect a value in sustainability. The questions used from Burt's thesis can be found below in **Table 3.3.**

Table 3.3. Lifestyle and Sustainability Questions.

Lifestyle Questionnaire, Items 5-6.
I play a limited proactive role in protecting the environment from over consumption, excess waste, climate change, pollution, etc., (e.g. recycling and buying energy saving appliances etc.).
I play a substantially proactive role in protecting the environment from over consumption, excess waste, climate change, pollution, etc., (e.g. composting, limiting fossil fuel use, avoiding industrial agriculture, etc.).

Survey Development

The survey was developed using the university-provided, licensed access to Qualtrics survey software. Qualtrics is a sophisticated web-hosted survey software that utilizes user-friendly point-and-click methods and is equipped with tools for collecting insights and basic analysis (Qualtrics, 2015). Because the survey was hosted online, participants could access it using a URL link. In regards to the Revised NEP and lifestyle questionnaire, the survey utilized forced-response mechanisms so that respondents were required to answer the questions in their entirety in order to finish the survey. Responses to the survey were anonymized by Qualtrics. The survey took, on average, approximately twenty minutes to complete.

Analysis

Survey results were analyzed using IBM's Statistical Package for the Social Sciences (SPSS), also provided by the university through organizational license. SPSS is a widely used, complex tool for data analytics (IBM, 2015). The results were analyzed descriptively by category: students, staff, and faculty. Within each category, the means in response to each statement were calculated and recorded. They were then examined further, depending on the gender and political affiliation of respondents. Within each category, particular groups were selected (based on gender or political affiliation) and mean responses were analyzed using means comparisons and independent samples t-tests for statistical significance. Ninety-five percent was used as the threshold for statistical significance and this significance was two-tailed.

It is important to recognize the limitations of this particular analysis. While statistical significance is a common means of analysis in this particular type of study, it has undergone critique for the incomplete insight it provides. P-value only reveals the probability that the null hypothesis is true of a difference among groups (meaning that the difference is due to random chance) (Cumming, 2012). When a difference among groups has statistical significance, it only means that the difference is not likely to be a result of random chance. It does not explain to what extent the difference is meaningful. For example, statistical significance does not distinguish between the difference of a point among groups and the difference of a half-point, although one difference in means may certainly have more meaning than the other (Cumming, 2012).

This analysis would have benefitted from cross-tabulations, such as Cramer's V, to measure magnitude, strength of association, and provide other layers of insight to this

study's findings. This analysis would have further benefited from an ANOVA analysis to complement the significance testing and offer insight with three group comparisons. However, in light of the scope of this study and the limitation of time, it was appropriate to limit the analysis to statistical significance testing.

Approval of the Institutional Review Board

All research on human subjects through survey methodology must be approved by the University of Mississippi Institutional Review Board. The instruments used in the present survey were submitted through the exempt review application format. Documents submitted to the IRB included a copy of the complete survey methodology, any text that would be used in the emails recruiting participants, an informed consent form, and the link to the online survey. These documents can be found in the **Appendix** on page 81.

CHAPTER 4

DESIGN IMPLEMENTATION

The survey began fielding on Qualtrics on October 22nd, 2014. Through the Office of Sustainability's email blast function, the survey was sent to all members of the University of Mississippi listserv, including students, faculty, staff, and some alumni. The survey was deactivated November 24th, 2014, after fielding for a total of approximately five and a half weeks. The survey accumulated 621 total responses. Responses from those that answered "*No"* to the question "*Are you 18 years of age or older?"* were deleted. Incomplete responses were also deleted. The survey collected too few responses from University of Mississippi satellite campuses to yield useful information about these particular campus environments, so responses from any campus other than the Oxford main campus were omitted from the analysis. This left a total of 518 valid responses.

Female responses nearly quadrupled male responses, (with 369 female responses and 139 male responses total), far from an accurate depiction of gender demographics at the University of Mississippi. As such, appropriate weights were applied. The specific weights used can be found in **Table 4.1**. These weights were determined using the following formula:

$$P_\alpha \,\%\,/\, S_\alpha \,\% \;=\; W_\alpha$$

Where P_a equals number of variable present in the population, S_a equals number of variable present in the sample, and W_a equals variable weight.

Table 4.1. Weighting used, by gender and role.

	Female Population %	Male Population %	Female Survey %	Male Survey %	Male Weight	Female Weight
Students	*55*	*45*	*78.5*	*18.7*	*2.4*	*0.7*
Faculty	*45*	*55*	*32.8*	*32.8*	*1.7*	*0.7*
Staff	*53*	*47*	*19.8*	*19.8*	*2.4*	*0.7*

("Mini Fact-Book," 2014).

As stated in Chapter 2, the Revised New Ecological Paradigm (Revised NEP) is a set of fifteen ecological statements, with eight strongly pro-ecological statements and seven strongly anti-ecological statements alternating. In response to each statement, respondents must indicate the degree to which they agree on a five-point Likert scale (with 1=Strongly Agree, and 5=Strongly Disagree). As such, a mean lower than 3 on one statement can indicate a pro-ecological response, while at the same time, a mean lower than 3 on another question may indicate the opposite. For the purposes of a clear analysis, the means of the anti-ecological statements have been converted to match those of the pro-ecological statements, so that a mean below 3 universally signifies a pro-ecological response. This is the standard conversion used in other instances in the literature where the Revised NEP survey methodology is employed (Dunlap, et. al., 2009; Harraway et. al., 2012; Zelezny, et. al., 2000). For example, if a respondent were to answer with "1=Strongly Agree" to an anti-ecological statement, this analysis will treat that response as a 5. Lower means will always signify greater pro-ecological endorsement, whereas higher means will always signify lower pro-ecological

endorsement. This conversion generated valid responses less than 1 in cases where the original, unconverted mean was 4.0 or greater.

Descriptive statistics were calculated for analysis of all items on the survey. Within the three categories (student, faculty, and staff), frequencies and means were calculated. Additionally, means comparisons were made between ecological attitudes and various demographic characteristics, such as gender, political affiliation, ethnicity (the latter category was not included in the analysis for insufficiency of complete responses). The mean comparisons were tested for statistical significance using an independent samples t-test with a significance of $p \leq 0.05$.

CHAPTER 5

RESULTS OF THE STUDY

Demographic Characteristics

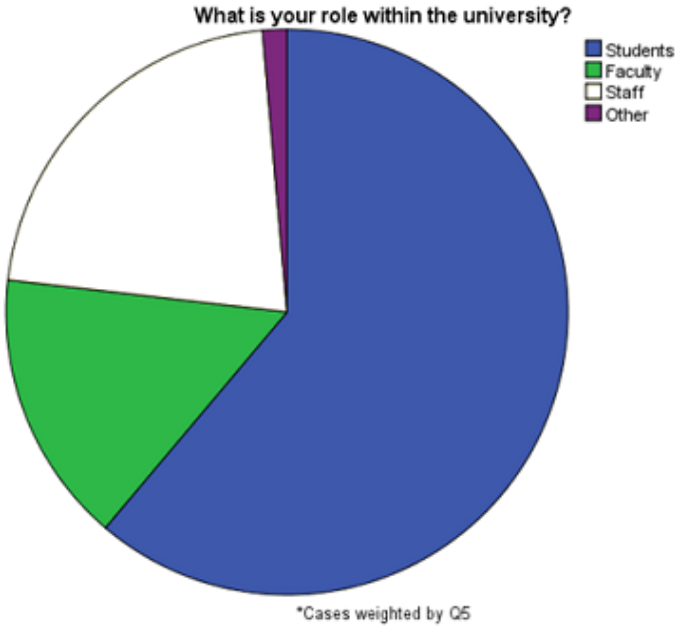
Of all 518 responses, 317 (61.1%) were from students, 79 (15.1%) were from faculty, 114 (21.8%) were from staff, and 8 responses did not identify with any of the three main categories. See **Figure 5.1** for a visual breakdown of the responses to the survey.

Female responses nearly quadrupled male responses, (with 369 female responses and 139 male responses total), far from an accurate depiction of gender demographics at the University of Mississippi. Weighing was used to match the sample to the population of University of Mississippi demographics and has been addressed in the previous chapter (**See Table 4.1)**. The survey data did provide a varied political makeup within the University of Mississippi community, with 160 (30.9%) conservatives, 159 (30.7%) moderates, 158 (30.4%) liberals, and 41 (8.0%) undecided responding.

Although the survey was dispersed to all students, faculty, and staff at the University of Mississippi, the responses are not representative of minorities. Only 33 (6.4%) complete responses are from those identifying as black or African American. 12

(2.3%) complete responses identify as Native American or American Indian. 15 (2.8%) identify as Asian. Only 2 (0.0%) respondents identifying as Pacific Islander, this study is disproportionately weighted towards those that identify as white or Caucasian. Consequently, this study cannot yield any useful comparison among these identifications and may only offer insight into the environmental attitudes and orientations of white students, faculty, and staff at the University of Mississippi.

Figure 5.1. Role within University.



Student characteristics.

Student responses were 78.5% female and 18.7% male, versus a student population of 55% female and 45% male ("Mini Fact-Book," 2014). Weighting to compensate for this discrepancy has been discussed in the previous chapter. Out of the

responding students, there were 73 (14.1%) freshmen, 42 (8.2%) sophomores, 96 (18.5%) juniors, 123 (23.8%) seniors, and 54 (10%) graduate students represented. An insignificant number of professional school students responded to the survey. Students displayed a varied political makeup, with 35.4% identifying as conservative, 30.9% as moderate, and 24.1% as liberal. 9.4% could not identify a political affiliation.

Faculty characteristics.

Faculty responses were 67.2% female and 32.8% male, versus a faculty population of 45% female and 55% male ("Mini Fact-Book," 2014). Again, weights were applied and discussed in previous chapter. Faculty political makeup was less varied than that of students, with 10.1% identifying as conservative, 25.8% as moderate, and 59.6% as liberal. Only 2.2% could not identify a particular political affiliation.

Staff characteristics.

Staff responses were by far the least representative in terms of gender, with 80.2% female and 19.8% male responses, versus a staff population of 47% female and 53% male (OIREP, 2014). As with other categories, weighting was applied and discussed earlier in the previous chapter. In terms of political affiliation, 31.9% identified as conservative, 35.4% as moderate, and 26.5% as liberal. 5.3% could not identify a particular political affiliation.

Revised New Ecological Paradigm Analysis

General responses.

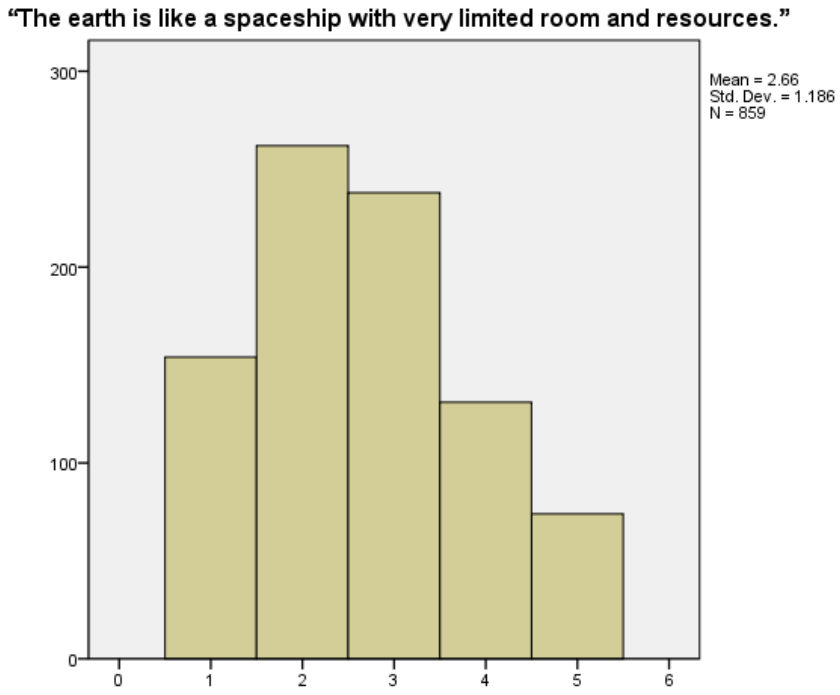
Students, faculty, and staff responded to a set of fifteen ecological statements, altogether referred to as the Revised New Ecological Paradigm (Revised NEP), with statements alternating between extremely pro-ecological and anti-ecological. As discussed in the previous chapter, all means in response to the anti-ecological (even-numbered) statements have been converted to be consistent with the values of the means in response to pro-ecological (odd-numbered) statements. This ensures that regardless of the nature of the statement, a lower mean signifies a more ecologically sensitive response and a higher mean signifies a less ecologically sensitive response. This conversion generated some means lower than 1.00—originally the lowest value a mean could take. These are still valid and indicate a strongly pro-ecological response. Again, it is important to acknowledge that these results are not representative of minorities within the University of Mississippi community.

The University of Mississippi's average ecological mean equals 2.0, signifying a pro-ecological mindset (with figures closer to 3.0 signifying more uncertainty or neutrality, and figures greater than 3.0 signifying an anti-ecological mindset). The highest average mean was a 2.66 and occurred in response to the statement *"The earth is like a spaceship with very limited room and resources."* While this represents the least ecological response in campus-wide averages, nearly half of respondents indicated they were either in moderate or strong agreement but also shows that considerable uncertainty or neutrality exists about the statement (**Figure 5.2**).

Respondents were similarly uncertain in regards several other items of the Revised NEP scale. "*When humans interfere with nature it often produces disastrous consequences"* elicited an average mean of 2.54, as did "*The earth has plenty of natural resources if we just learn how to develop them."* The statement "*The balance of nature is very delicate and easily upset"* had an average mean of 2.43. All three items displayed similar patterns of uncertainty as item 11, "*The earth is like a spaceship with very limited room and resources,"* where the second greatest percentage of respondents indicated a 3 on the Likert scale. Altogether, these items constitute the four highest (least pro-ecological) responses among campus-wide average means.

Figure 5.2. Revised NEP Item 11, Total Responses.

Note: X-Axes of histograms are not standardized. Note: Values < 1.00 are a result of data conversion and are valid.

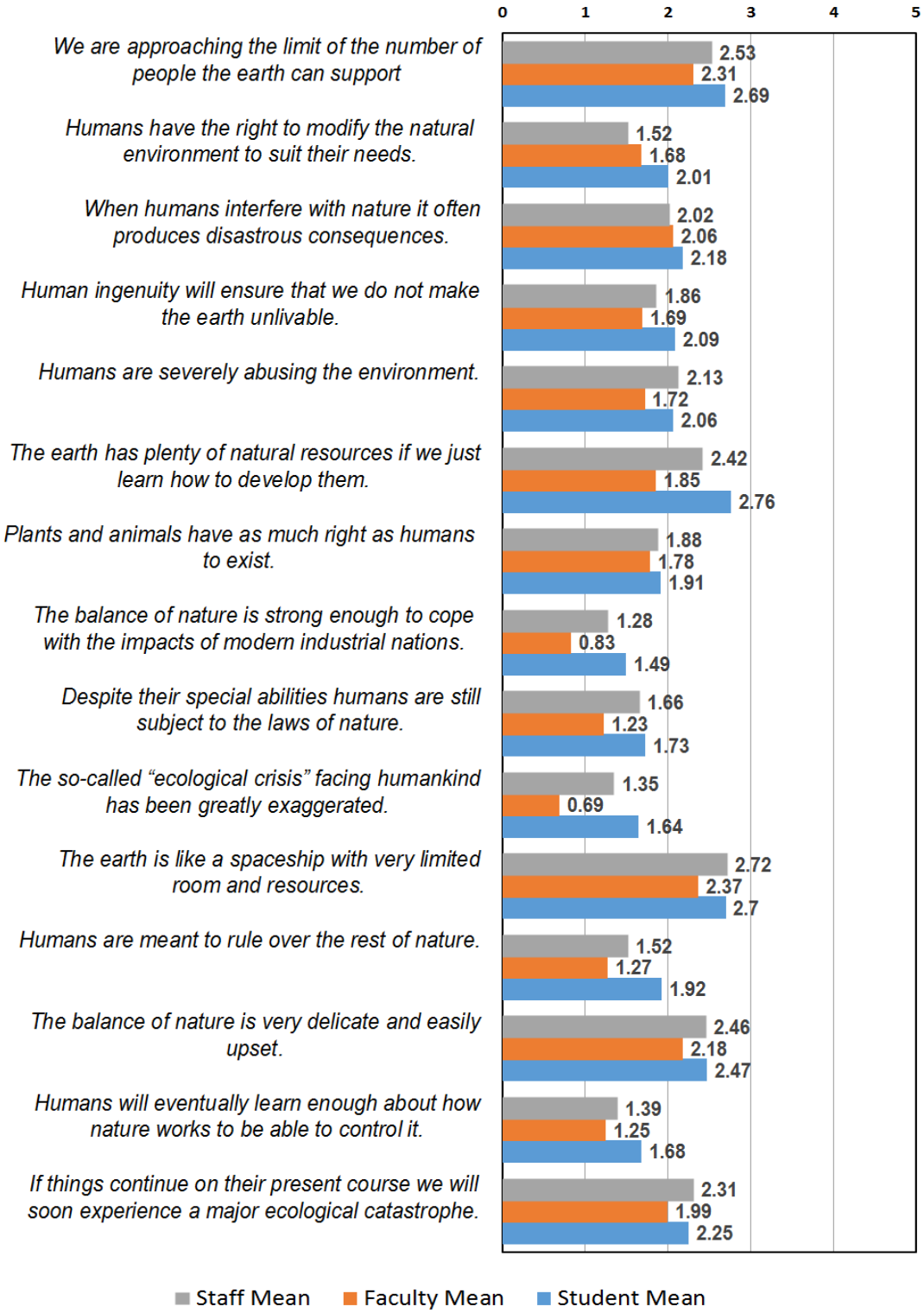


The lowest average mean (signifying the most pro-ecological response) was a 1.34 and occurred in response to the statement "*The so-called "ecological crisis" facing humankind has been greatly exaggerated.*" Similarly low, the average mean response to the statement "*The balance of nature is strong enough to cope with the impacts of modern industrial nations"* equaled 1.43. Many other average responses fell below the general campus-wide average of 2.0. **Figure 5.3** provides a full listing of average means for all Revised NEP items by category.

When male survey respondents were isolated, the lowest (most pro-ecological) mean occurred in response to the statement "*Despite their special abilities humans are still subject to the laws of nature."* The mean to this statement was 1.49. The highest (least pro-ecological) mean occurred in response to the statement *"We are approaching the limit of the number of people the earth can support,"* and equaled 2.68. When female survey respondents were isolated, the lowest (most pro-ecological) mean occurred in response to the statement "*Humans will eventually learn enough about how nature works to be able to control it."* The mean to this statement was 1.48. The highest (least pro-ecological) mean occurred in response to the statement *"The earth is like a spaceship with very limited room and resources,"* and equaled 2.65.

Women held more pro-ecological views in response to all statements, with the exception of the statement "*The earth is like a spaceship with very limited room and resources*," where the female mean response (2.65) was only 0.01 higher than the male mean response (2.64). An independent samples T-test ($p \leq 0.05$) was used to test differences in means among total male and female respondents. The differences in male and female means were statistically significant in responses to 9 out of 15 Revised NEP

Figure 5.3. Student, Faculty, and Staff Means, Revised NEP.



Note: Values < 1.00 are a result of data conversion and are valid.

items. In **Table 5.1,** the differences between male and female responses are shown, along with their significances. Male and female survey respondents were in least agreement in response to the statement *"Plants and animals have as much right as humans to exist,"* with a difference of 0.39. Male and female survey respondents were in similar

Table 5.1 Total Male versus Female T-Test, Revised NEP.
Note: Values < 1.00 are a result of data conversion and are valid.

Revised NEP Questions	***Total Male Avg.***	***Total Female Avg.***	***Sig. p ≤ 0.05***
We are approaching the limit of the number of people the earth can support	*2.68*	*2.54*	*.162*
Humans have the right to modify the natural environment to suit their needs.	*2.31*	*1.71*	*<.001**
When humans interfere with nature it often produces disastrous consequences.	*2.40*	*2.04*	*<.001*
Human ingenuity will ensure that we do not make the earth unlivable.	*2.13*	*1.93*	*.033*
Humans are severely abusing the environment.	*2.15*	*1.97*	*.037*
The earth has plenty of natural resources if we just learn how to develop them.	*2.57*	*2.51*	*.558**
Plants and animals have as much right as humans to exist.	*2.19*	*1.80*	*<.001*
The balance of nature is strong enough to cope with the impacts of modern industrial nations.	*1.49*	*1.28*	*.019*
Despite their special abilities humans are still subject to the laws of nature.	*1.57*	*1.63*	*.317**
The so-called "ecological crisis" facing humankind has been greatly exaggerated.	*1.50*	*1.38*	*.251*
The earth is like a spaceship with very limited room and resources.	*2.64*	*2.65*	*.926*
Humans are meant to rule over the rest of nature.	*1.85*	*1.71*	*.253**
The balance of nature is very delicate and easily upset.	*2.57*	*2.36*	*.015*
Humans will eventually learn enough about how nature works to be able to control it.	*1.70*	*1.48*	*.024*
If things continue on their present course we will soon experience a major ecological catastrophe.	*2.45*	*2.15*	*.001*

**Equal variances could not be assumed.*

disagreement to the statement "*When humans interfere with nature it often produces disastrous consequences,"* with a difference of 0.36.

Analysis of general responses based on political affiliation revealed marked differences between those identifying as conservatives, moderates, and liberals at the University of Mississippi. See **Table 5.2** for the breakdown of political identification by category: students, faculty, and staff.

Table 5.2. Political Affiliation Organized by Students, Faculty, Staff.

	% Conservative	*% Moderate*	*% Liberal*
Students	*70.4%*	*60.5%*	*46.9%*
Faculty	*22.4%*	*13.1%*	*31.4%*
Staff	*4.2%*	*24.1%*	*20.9%*
No Response	*3%*	*2.3%*	*0.8%*
Total	*100%*	*100%*	*100%*

In response to all statements of the Revised NEP, conservatives answered with the highest (least pro-ecological) means, whereas liberals responded with the lowest (most pro-ecological) means. Moderates generally had means that landed somewhere in between conservatives and liberals on all items of the Revised NEP, with the exception of one statement that did not have significance. Altogether, only three comparisons between conservatives and moderates lacked significance ($p \leq 0.05$), with all other comparisons showing high significance. See **Table 5.3** for all mean responses organized by political affiliation.

Student Revised NEP responses.

With an average mean response of 2.10, students had the highest (least pro-ecological) responses to the Revised NEP questions in terms of the three main survey categories (students, faculty, and staff). Students had the highest, or least pro-ecological,

Table 5.3. Total Responses by Political Affiliation, Revised NEP.

Note: Values < 1.00 are a result of data conversion and are valid.

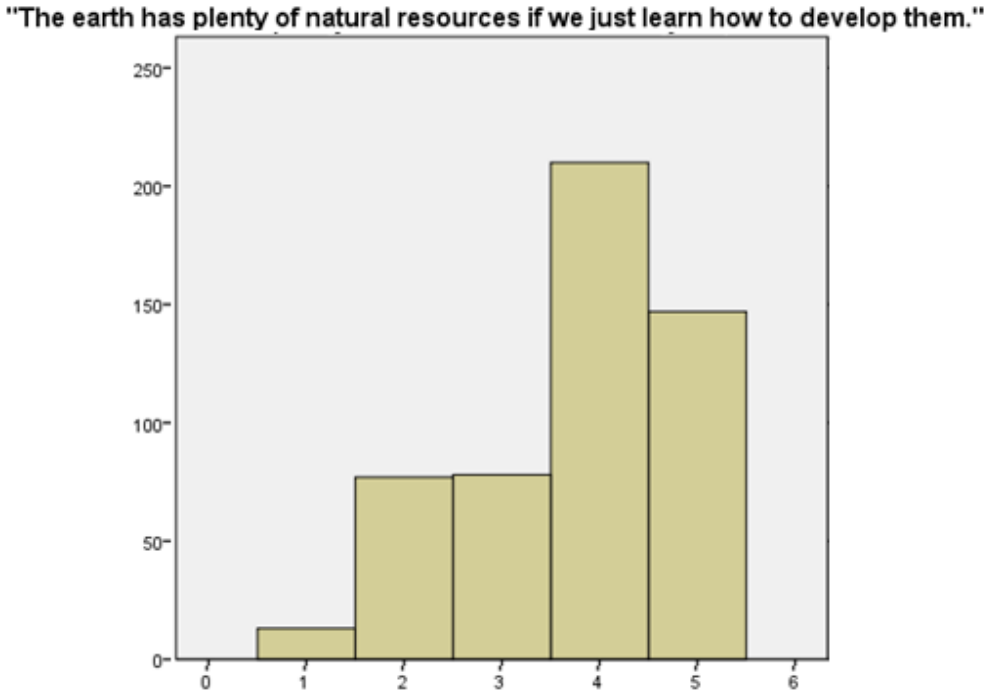
Revised NEP Questions	***Conservatives***	***Moderates***	***Liberals***
We are approaching the limit of the number of people the earth can support	*3.10*	*2.40*	*2.15*
Humans have the right to modify the natural environment to suit their needs.	*2.1*	*1.9*	*1.52*
When humans interfere with nature it often produces disastrous consequences.	*2.38*	*2.21*	*1.82*
Human ingenuity will ensure that we do not make the earth unlivable.	*2.11*	*2.08*	*1.72*
Humans are severely abusing the environment.	*2.59*	*1.98*	*1.44*
The earth has plenty of natural resources if we just learn how to develop them.	*2.90*	*2.51*	*2.11*
Plants and animals have as much right as humans to exist.	*2.40*	*1.77*	*1.50*
The balance of nature is strong enough to cope with the impacts of modern industrial nations.	*1.74*	*1.26*	*0.83*
Despite their special abilities humans are still subject to the laws of nature.	*1.87*	*1.59*	*1.35*
The so-called "ecological crisis" facing humankind has been greatly exaggerated.	*2.31*	*1.23*	*0.58*
The earth is like a spaceship with very limited room and resources.	*3.14*	*2.57*	*2.21*
Humans are meant to rule over the rest of nature.	*2.59*	*1.78*	*0.90*
The balance of nature is very delicate and easily upset.	*2.60*	*2.52*	*2.07*
Humans will eventually learn enough about how nature works to be able to control it.	*1.63*	*1.75*	*1.23*
If things continue on their present course we will soon experience a major ecological catastrophe.	*2.85*	*2.07*	*1.72*

**Equal variances could not be assumed.*

response to the statement "*The earth has plenty of natural resources if we just learn how to develop them,"* with a mean of 2.76. While a large number of students disagreed with this anti-ecological statement, a majority were either in moderate or strong agreement with it

(as can be seen in **Figure 5.4)**. This contrasts with the highest campus-wide average mean response, noted earlier, where the mean was higher simply due to a large number of uncertain responses.

Figure 5.4. Student response to Revised NEP item 6.
Note: X-Axes of histograms are not standardized. Note: Values < 1.00 are a result of data conversion and are valid.



Students responded most pro-ecologically to one of the Revised NEP's strongly anti-ecological statements, "*The balance of nature is strong enough to cope with the impacts of modern industrial nations,"* with a mean of 1.49. Students responded similarly pro-ecologically to the statements "*The so-called "ecological crisis" facing humankind has been greatly exaggerated*," and "*Humans will eventually learn enough about how nature works to be able to control it*," with means of 1.64 and 1.68 respectively. Several other items had mean responses that were below the campus and student averages, as can be seen in **Table 5.4**.

Table 5.4. Student Responses, Revised NEP.

Note: Values < 1.00 are a result of data conversion and are valid.

Revised NEP Questions	***Student Means***
We are approaching the limit of the number of people the earth can support	*2.69*
Humans have the right to modify the natural environment to suit their needs.	*2.01*
When humans interfere with nature it often produces disastrous consequences.	*2.18*
Human ingenuity will ensure that we do not make the earth unlivable.	*2.09*
Humans are severely abusing the environment.	*2.06*
The earth has plenty of natural resources if we just learn how to develop them.	*2.76*
Plants and animals have as much right as humans to exist.	*1.91*
The balance of nature is strong enough to cope with the impacts of modern industrial nations.	*1.49*
Despite their special abilities humans are still subject to the laws of nature.	*1.73*
The so-called "ecological crisis" facing humankind has been greatly exaggerated.	*1.64*
The earth is like a spaceship with very limited room and resources.	*2.70*
Humans are meant to rule over the rest of nature.	*1.92*
The balance of nature is very delicate and easily upset.	*2.47*
Humans will eventually learn enough about how nature works to be able to control it.	*1.68*
If things continue on their present course we will soon experience a major ecological catastrophe.	*2.25*

Students appear to be responding to statements from the Revised NEP that fit into the "ecological limits" facet. This either suggests that students are divided on the existence of hard ecological limits, or illustrates an uncertainty or uneasiness with student understanding of this concept.

Comparisons among different classifications (freshmen versus seniors, etc.) yielded little useful information as none were statistically significant, and the discrepancies between the means were not of any magnitude. Just as in the general

University of Mississippi population, female students were more pro-ecological in their responses than their male counterparts. An independent sample t-test comparing means between female and male students revealed that on all statistically significant measures ($p \leq 0.05$), female students responded more pro-ecologically than male students.

Differences between female and male students occur in the following Revised NEP statements:

- *Humans have the right to modify the natural environment to suit their needs.*
- *When humans interfere with nature it often produces disastrous consequences.*
- *Plants and animals have as much right as humans to exist.*
- *Humans will eventually learn enough about how nature works to be able to control it.*
- *If things continue on their present course we will soon experience a major ecological catastrophe*

Differences were particularly notable in response to the statements "*Humans have the right to modify the natural environment to suit their needs*," and "*If things continue on their present course we will soon experience a major ecological catastrophe,*" where the difference in means totaled nearly 0.5 between female and male students in response to both statements. The instances in which female students hold more pro-ecological views than male students mirror the general population (items 2, 3, 7, 14, and 15). The full collection of mean comparisons between female and male students, along with statistical significance, can be found in **Table 5.5.**

Just as in the general University of Mississippi population, those identifying as conservatives politically responded with higher means (less pro-ecological attitudes) than

those identifying as moderates or liberals. Liberals responded with lower means (higher pro-ecological attitudes) than both categories. Almost all comparisons among political affiliations had significance, with few exceptions.

Table 5.5. Male versus Female Student T-Test, Revised NEP.
Note: Values < 1.00 are a result of data conversion and are valid.

Revised NEP Questions	***Male Students***	***Female Students***	***Sig. p ≤ 0.05***
We are approaching the limit of the number of people the earth can support	*2.72*	*2.64*	*.531*
Humans have the right to modify the natural environment to suit their needs.	*2.28*	*1.91*	*.005**
When humans interfere with nature it often produces disastrous consequences.	*2.47*	*2.10*	*<.001*
Human ingenuity will ensure that we do not make the earth unlivable.	*2.29*	*2.02*	*.058*
Humans are severely abusing the environment.	*2.10*	*2.02*	*.456*
The earth has plenty of natural resources if we just learn how to develop them.	*2.76*	*2.75*	*.983**
Plants and animals have as much right as humans to exist.	*2.15*	*1.84*	*.009*
The balance of nature is strong enough to cope with the impacts of modern industrial nations.	*1.51*	*1.45*	*.608*
Despite their special abilities humans are still subject to the laws of nature.	*1.62*	*1.74*	*.209**
The so-called "ecological crisis" facing humankind has been greatly exaggerated.	*1.61*	*1.6*	*.938*
The earth is like a spaceship with very limited room and resources.	*2.59*	*2.70*	*.407*
Humans are meant to rule over the rest of nature.	*1.90*	*1.93*	*.856**
The balance of nature is very delicate and easily upset.	*2.56*	*2.40*	*.139*
Humans will eventually learn enough about how nature works to be able to control it.	*1.91*	*1.60*	*.025**
If things continue on their present course we will soon experience a major ecological catastrophe.	*2.47*	*2.17*	*.005*

**Equal variances could not be assumed.*

Faculty Revised NEP responses.

In terms of the three main categories, faculty of the University of Mississippi seem to have the most well-established pro-ecological endorsement. Faculty, on all statistically significant measures, endorsed pro-ecological views with lower means than both students and staff members of the University. Faculty had by far the lowest (most pro-ecological) average mean of 1.66 to the Revised NEP questions. Faculty disagreed most strongly with the statement "*The so-called "ecological crisis" facing humankind has been greatly exaggerated,"* with a mean of 0.69—the lowest mean response to any statement out of all three categories of students, faculty, and staff. Faculty also responded with a similarly low mean (0.83) to the statement "*The balance of nature is strong enough to cope with the impacts of modern industrial nations*." This is the same statement to which students responded with the most agreement. Faculty had the least pro-ecological response to the statement "*The earth is like a spaceship with very limited room and resources,"* with a mean of 2.37. The full collection of faculty mean responses can be found in **Table 5.6.**

The statements that faculty respond strongly to fall again within the facet of "ecological limits," as designated by the Revised NEP. Faculty seem to be divided or uncertain over the concept of ecological limits—a trend mirrored in student responses.

Table 5.6. Faculty Responses, Revised NEP.
Note: Values < 1.00 are a result of data conversion and are valid.

Revised NEP Questions	***Faculty Means***
We are approaching the limit of the number of people the earth can support	*2.31*
Humans have the right to modify the natural environment to suit their needs.	*1.68*
When humans interfere with nature it often produces disastrous consequences.	*2.06*
Human ingenuity will ensure that we do not make the earth unlivable.	*1.69*
Humans are severely abusing the environment.	*1.72*
The earth has plenty of natural resources if we just learn how to develop them.	*1.85*
Plants and animals have as much right as humans to exist.	*1.78*
The balance of nature is strong enough to cope with the impacts of modern industrial nations.	*0.83*
Despite their special abilities humans are still subject to the laws of nature.	*1.23*
The so-called "ecological crisis" facing humankind has been greatly exaggerated.	*0.69*
The earth is like a spaceship with very limited room and resources.	*2.37*
Humans are meant to rule over the rest of nature.	*1.27*
The balance of nature is very delicate and easily upset.	*2.18*
Humans will eventually learn enough about how nature works to be able to control it.	*1.25*
If things continue on their present course we will soon experience a major ecological catastrophe.	*1.99*

Just as female students responded more pro-ecologically than male students, female faculty are also more pro-ecological than male faculty on all statistically significant measures ($p \leq 0.05$). Female faculty responded more pro-ecologically with statistically significant results in regards to the following Revised NEP statements:

- *Humans have the right to modify the natural environment to suit their needs.*
- *The earth has plenty of natural resources if we just learn how to develop them.*
- *Plants and animals have as much right as humans to exist.*

- *The balance of nature is strong enough to cope with the impacts of modern industrial nations.*
- *The so-called "ecological crisis" facing humankind has been greatly exaggerated.*
- *If things continue on their present course we will soon experience a major ecological catastrophe.*

As you can see, within both faculty and student categories, females responded more pro-ecologically than males, often on the same Revised NEP items as students (items 2, 7, and 15). The greater prevalence of pro-ecological views among female faculty versus male faculty mirrors that of the general University of Mississippi population (see items 2, 7, 8, and 15). **Table 5.7** shows the complete comparison between female and male faculty and the results of their significance testing.

Because faculty hold the most pro-ecological average mean overall, it would be reasonable to assume that even when organized by political affiliation, faculty would not follow the trend set by general population and students and be more pro-ecological in their responses, independent of political affiliation. This is not the case. In fact, among faculty, the difference in ecological mindset among political affiliations is even more pronounced on all statistically significant measures. Conservatives among faculty by and large respond with the highest (least pro-ecological) means in response to all questions, often with even higher means than student conservatives. Liberals among faculty answer with distinctively low means, many below 1.0. Moderates remained more pro-ecological in their responses than conservatives, but less pro-ecological than their liberal

counterparts, although they seem to align themselves more closely with liberal faculty on most measures.

Table 5.7. Male versus Female Faculty T-Test, Revised NEP.
Note: Values < 1.00 are a result of data conversion and are valid.

Revised NEP Questions	***Male Faculty***	***Female Faculty***	***Sig. p ≤ 0.05***
We are approaching the limit of the number of people the earth can support	*2.57*	*2.18*	*.068*
Humans have the right to modify the natural environment to suit their needs.	*2.20*	*1.42*	*<.001*
When humans interfere with nature it often produces disastrous consequences.	*2.23*	*1.98*	*.207**
Human ingenuity will ensure that we do not make the earth unlivable.	*1.68*	*1.69*	*.974**
Humans are severely abusing the environment.	*1.95*	*1.60*	*.131**
The earth has plenty of natural resources if we just learn how to develop them.	*2.27*	*1.64*	*.009**
Plants and animals have as much right as humans to exist.	*2.18*	*1.58*	*.002*
The balance of nature is strong enough to cope with the impacts of modern industrial nations.	*1.20*	*0.64*	*.002*
Despite their special abilities humans are still subject to the laws of nature.	*1.30*	*1.20*	*.295**
The so-called "ecological crisis" facing humankind has been greatly exaggerated.	*1.07*	*0.51*	*.007*
The earth is like a spaceship with very limited room and resources.	*2.66*	*2.22*	*.055*
Humans are meant to rule over the rest of nature.	*1.50*	*1.13*	*.173**
The balance of nature is very delicate and easily upset.	*2.36*	*2.09*	*.177*
Humans will eventually learn enough about how nature works to be able to control it.	*1.36*	*1.20*	*.402**
If things continue on their present course we will soon experience a major ecological catastrophe.	*2.30*	*1.84*	*.029*

**Equal variances could not be assumed.*

Staff Revised NEP responses.

The staff average mean response was 1.94—between that of students (2.10) and that of faculty (1.66). This holds true in individual item mean responses, where staff, on all statistically significant measures, were more pro-ecological in their responses than students, but less pro-ecological in their responses than faculty. Interestingly, it appears that staff alternate their alignment between statements, usually aligning with faculty responses, but sometimes aligning more with student responses. For example, in response to the statement "*The so-called "ecological crisis" facing humankind has been greatly exaggerated*," staff overwhelmingly aligned their responses with students, with a mean of 1.35, 0.31 above the student mean of 1.64, but more than half of a point greater than the faculty mean of 0.69.

Staff responded with the highest average mean, a 2.72, in regards to the statement "*The earth is like a spaceship with very limited room and resources."* The higher mean in this instance was created by a greater sense of uncertainty in staff responses to this item. Most staff respondents indicated either moderate agreement with this statement, or uncertainty. Staff responded with the lowest average mean, a 1.28, to the statement "*The balance of nature is strong enough to cope with the impacts of modern industrial nations."* Interestingly, students also responded most pro-ecologically to this statement, and faculty responded with their second-lowest mean in regards to this statement. **Table 5.8** shows all mean responses of staff.

In analysis of Revised NEP responses in terms of gender, staff follow the same trend set by general population, as well as students and faculty. Female staff members display more pro-ecological views than male staff members on all statistically significant

Table 5.8. Staff Responses, Revised NEP.

Note: Values < 1.00 are a result of data conversion and are valid.

Revised NEP Questions	***Staff Means***
We are approaching the limit of the number of people the earth can support	*2.53*
Humans have the right to modify the natural environment to suit their needs.	*1.52*
When humans interfere with nature it often produces disastrous consequences.	*2.02*
Human ingenuity will ensure that we do not make the earth unlivable.	*1.86*
Humans are severely abusing the environment.	*2.13*
The earth has plenty of natural resources if we just learn how to develop them.	*2.42*
Plants and animals have as much right as humans to exist.	*1.88*
The balance of nature is strong enough to cope with the impacts of modern industrial nations.	*1.28*
Despite their special abilities humans are still subject to the laws of nature.	*1.66*
The so-called "ecological crisis" facing humankind has been greatly exaggerated.	*1.35*
The earth is like a spaceship with very limited room and resources.	*2.72*
Humans are meant to rule over the rest of nature.	*1.52*
The balance of nature is very delicate and easily upset.	*2.46*
Humans will eventually learn enough about how nature works to be able to control it.	*1.39*
If things continue on their present course we will soon experience a major ecological catastrophe.	*2.31*

**Equal variances could not be assumed.*

measures ($p \leq 0.05$). Female staff responded more pro-ecologically than male staff in response to the following Revised NEP items:

- *Humans have the right to modify the natural environment to suit their needs.*
- *When humans interfere with nature it often produces disastrous consequences.*
- *Human ingenuity will ensure that we do not make the earth unlivable.*
- *Humans are severely abusing the environment.*
- *The earth has plenty of natural resources if we just learn how to develop them.*

- *Plants and animals have as much right as humans to exist.*
- *The balance of nature is strong enough to cope with the impacts of modern industrial nations.*

The differences among female and male staff members, again, share similarities with that of faculty, students, and the general population. All three categories (faculty, staff, and students) show greater pro-ecological views among women versus men in response to the statement "*Humans have the right to modify the natural environment to suit their needs,"* and the statement "*Plants and animals have as much right as humans to exist."* The full comparison of female staff means versus male staff means, along with statistical significance, can be found in **Table 5.9.**

In terms of political identification, staff followed the trend seen in students, faculty, as well as the general population. Staff members identifying as liberal held slightly lower means than those identifying as moderate, and even lower means than those identifying as conservative. Conservative staff members held the highest means in response to all questions. Staff members identifying as moderate held views somewhere in between those of their conservative and liberal counterparts. Generally, the differences among staff by political affiliation were less pronounced than that of faculty or students.

Table 5.9. Male versus Female Staff T-Test, Revised NEP.
Note: Values < 1.00 are a result of data conversion and are valid.

Revised NEP Questions	***Male Staff***	***Female Staff***	***Sig. p ≤ 0.05***
We are approaching the limit of the number of people the earth can support	*2.70*	*2.49*	*.325**
Humans have the right to modify the natural environment to suit their needs.	*2.41*	*1.31*	*<.001*
When humans interfere with nature it often produces disastrous consequences.	*2.43*	*1.92*	*<.001**
Human ingenuity will ensure that we do not make the earth unlivable.	*2.22*	*1.77*	*.009**
Humans are severely abusing the environment.	*2.54*	*2.03*	*.038**
The earth has plenty of natural resources if we just learn how to develop them.	*2.49*	*2.40*	*.017*
Plants and animals have as much right as humans to exist.	*2.24*	*1.79*	*.036**
The balance of nature is strong enough to cope with the impacts of modern industrial nations.	*1.70*	*1.17*	*.004**
Despite their special abilities humans are still subject to the laws of nature.	*1.78*	*1.63*	*.252**
The so-called "ecological crisis" facing humankind has been greatly exaggerated.	*1.70*	*1.27*	*.060**
The earth is like a spaceship with very limited room and resources.	*2.73*	*2.72*	*.964**
Humans are meant to rule over the rest of nature.	*2.05*	*1.39*	*.009**
The balance of nature is very delicate and easily upset.	*2.81*	*2.37*	*.030**
Humans will eventually learn enough about how nature works to be able to control it.	*1.54*	*1.35*	*.356**
If things continue on their present course we will soon experience a major ecological catastrophe.	*2.54*	*2.25*	*.172**

**Equal variances could not be assumed.*

Lifestyle Questionnaire Analysis

Survey respondents were then asked to what degree they agreed or disagreed with a series of statements regarding lifestyles, focusing on their comfort outdoors, participation in outdoor recreation, and a self-assessment of sustainability practices in their daily lives. Again, a five point Likert scale was used. A low mean denotes distinct

agreement to the statement, where a higher mean will denote more disagreement. Lifestyle prompts used are listed in **Table 5.10**:

Table 5.10. Lifestyle Questionnaire.

I voluntarily participate in and enjoy outdoor recreational activities (camping, hunting, fishing, hiking, boating, etc.) often.
I enjoy being outdoors.
Typically, I do not voluntarily engage in outdoor recreational activities (camping, hunting, fishing, hiking, boating, etc.).
The thought of being outdoors, disconnected from civilization, is uncomfortable to me.
I play a limited proactive role in protecting the environment from over consumption, excess waste, climate change, pollution, etc., (e.g. recycling and buying energy saving appliances etc.).
I play a substantially proactive role in protecting the environment from over consumption, excess waste, climate change, pollution, etc., (e.g. composting, limiting fossil fuel use, avoiding industrial agriculture, etc.).

General lifestyle responses.

In general, respondents signified comfort with the outdoors and outdoor activity. Respondents were in strong agreement with items 1 and 2, and strong disagreement with items 3 and 4. Where many respondents signified moderate agreement with item 5, with a mean of 2.40 (**See Figure 5.5)**, no one answer was strongly favored in item 6, with a relatively low mean of 2.30 (**See Figure 5.6). Table 5.11** includes all mean responses from analysis of total survey responses.

Figure 5.5. Lifestyle Questionnaire, Item 5, Total Responses.

Note: X-Axes of histograms are not standardized.

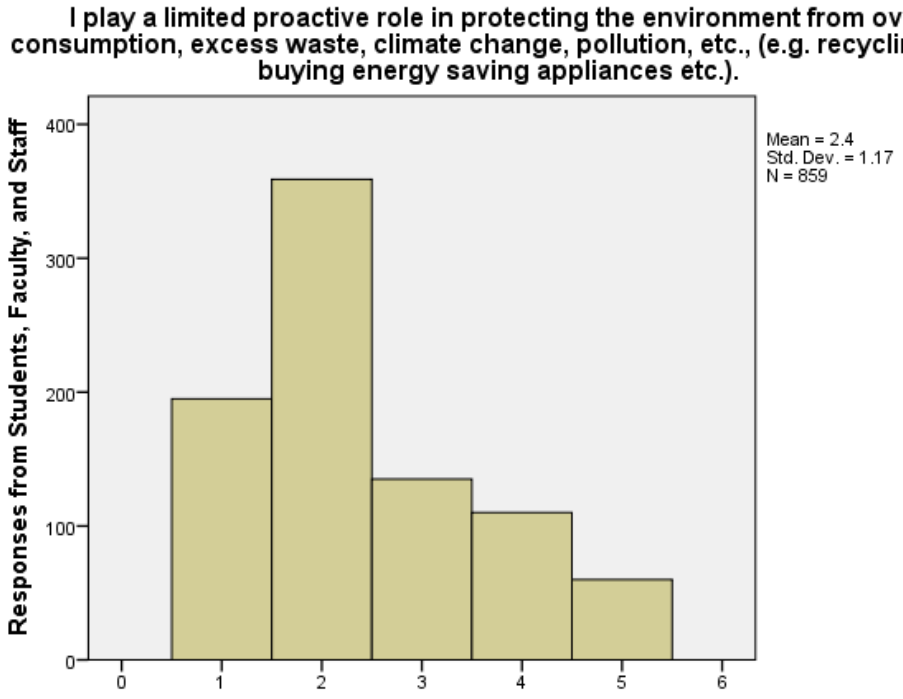


Figure 5.6. Lifestyle Questionnaire, Item 6, Total Responses .

Note: X-Axes of histograms are not standardized.

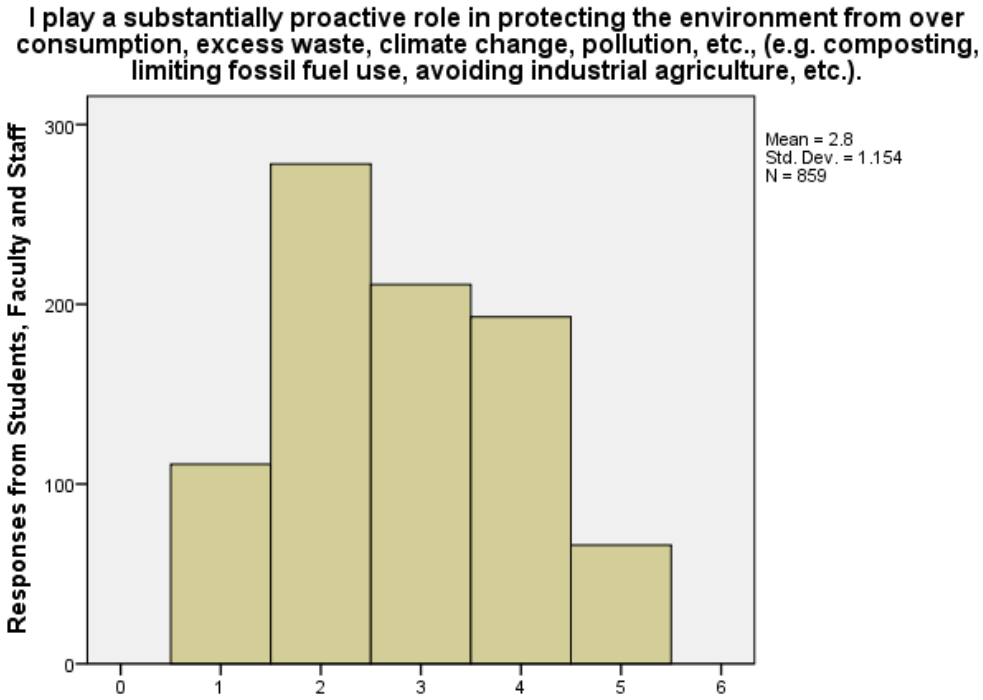


Table 5.11. Total Lifestyle Response Means.

Items	*Mean Response*
I voluntarily participate in and enjoy outdoor recreational activities (camping, hunting, fishing, hiking, boating, etc.) often.	*2.00*
I enjoy being outdoors.	*1.50*
Typically, I do not voluntarily engage in outdoor recreational activities (camping, hunting, fishing, hiking, boating, etc.).	*3.80*
The thought of being outdoors, disconnected from civilization, is uncomfortable to me.	*4.13*
I play a limited proactive role in protecting the environment from over consumption, excess waste, climate change, pollution, etc., (e.g. recycling and buying energy saving appliances etc.).	*2.40*
I play a substantially proactive role in protecting the environment from over consumption, excess waste, climate change, pollution, etc., (e.g. composting, limiting fossil fuel use, avoiding industrial agriculture, etc.).	*2.80*

**Equal variances could not be assumed.*

Both women and men were generally likely to enjoy being outdoors and reported voluntarily participating in outdoor recreational activities. Differences among men and women in their responses were statistically significant for most questions, with only items 5 and 6 lacking significance. Women were only slightly less likely than men to feel comfortable outdoors. They were also only slightly less likely to voluntarily participate in outdoor activities. See **Table 5.12** for complete mean comparisons between all female and male survey respondents.

In regards to political ideology, those identifying as conservatives, moderates, and liberals reported feeling comfortable outdoors and participating voluntarily in outdoor activities. No compelling correlation could be found between political affiliation and appreciation of the outdoors or outdoor activities. Even where slight differences occurred, comparisons between these groups in items 1-4 lacked statistical significance. However, items 5 and 6—those that targeted whether or not respondents participated in

Table 5.12. Total Male versus Female T-Test, Lifestyle Questionnaire

Items	*Male Mean*	*Female Mean*	*Sig. p ≤ 0.05*
I voluntarily participate in and enjoy outdoor recreational activities (camping, hunting, fishing, hiking, boating, etc.) often.	*1.84*	*2.03*	*<.001*
I enjoy being outdoors.	*1.34*	*1.54*	*.002*
Typically, I do not voluntarily engage in outdoor recreational activities (camping, hunting, fishing, hiking, boating, etc.).	*3.97*	*3.76*	*<.001*
The thought of being outdoors, disconnected from civilization, is uncomfortable to me.	*4.28*	*4.08*	*.003*
I play a limited proactive role in protecting the environment from over consumption, excess waste, climate change, pollution, etc., (e.g. recycling and buying energy saving appliances etc.).	*2.44*	*2.37*	*.675*
I play a substantially proactive role in protecting the environment from over consumption, excess waste, climate change, pollution, etc., (e.g. composting, limiting fossil fuel use, avoiding industrial agriculture, etc.).	*2.82*	*2.78*	*.531*

**Equal variances could not be assumed.*

sustainable practices in their daily lives—revealed interesting and statistically significant results. Conservatives responded with a mean of 2.58 in regards to whether or not they play a "limited proactive role" in protecting the environment through recycling or other less rigorous measures. Moderates, with a mean of 2.34, were only slightly more likely to respond that they played a "limited proactive role." Liberals responded with the most agreement to this statement, with a mean of 2.25. Responses to item 6—whether or not respondents participated *substantially* in protecting their environment—displayed even greater, statistically significant differences among political affiliations. Conservatives, again, responded with the least agreement, with a mean of 3.14. Liberals responded with

a much lower 2.38, signifying greater agreement. Again, moderates responded in between the two groups, with a 2.88.

Student lifestyle responses.

Students, like the general survey population, expressed strong agreement with items 1 and 2 of the lifestyle questionnaire. In response to "*I voluntarily participate in and enjoy outdoor recreational activities (camping, hunting, fishing, hiking, boating, etc.) often,"* students responded with a mean of 1.99. In response to "*I enjoy being outdoors,"* students responded with 1.53—indicating even stronger agreement with this statement. For items 3 and 4, the two negative lifestyle questions and essentially the inverses of items 1 and 2, students indicated strong disagreement. Student mean responses to these questions were 3.77 and 4.07.

In their response to item 5, "*I play a limited proactive role in protecting the environment from over consumption, excess waste, climate change, pollution, etc., (e.g. recycling and buying energy saving appliances etc.),"* students responded with a mean of 2.58. As can be seen in **Figure 5.7,** students show some consensus in their moderate agreement with the statement.

Student responses to item 6, "*I play a substantially proactive role in protecting the environment from over consumption, excess waste, climate change, pollution, etc., (e.g. composting, limiting fossil fuel use, avoiding industrial agriculture, etc.),"* showed more variety and less agreement with the statement. With a mean of 2.96, student responses to item 6 can be further examined in **Figure 5.8**.

Figure 5.7. Lifestyle Questionnaire, Item 5, Student Responses
Note: X-Axes of histograms are not standardized.

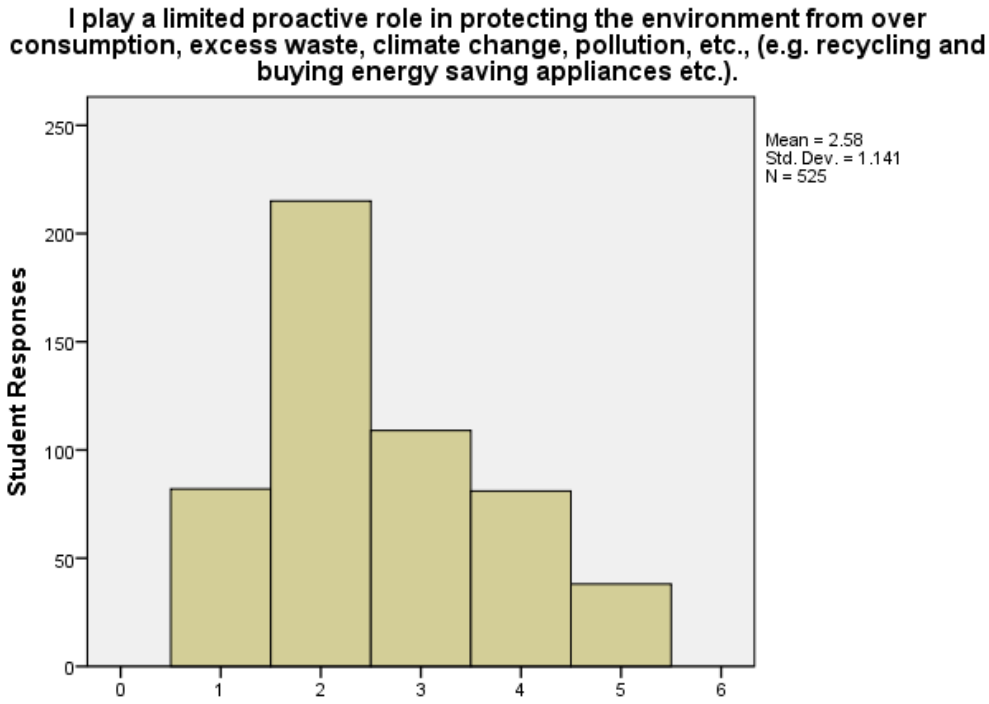
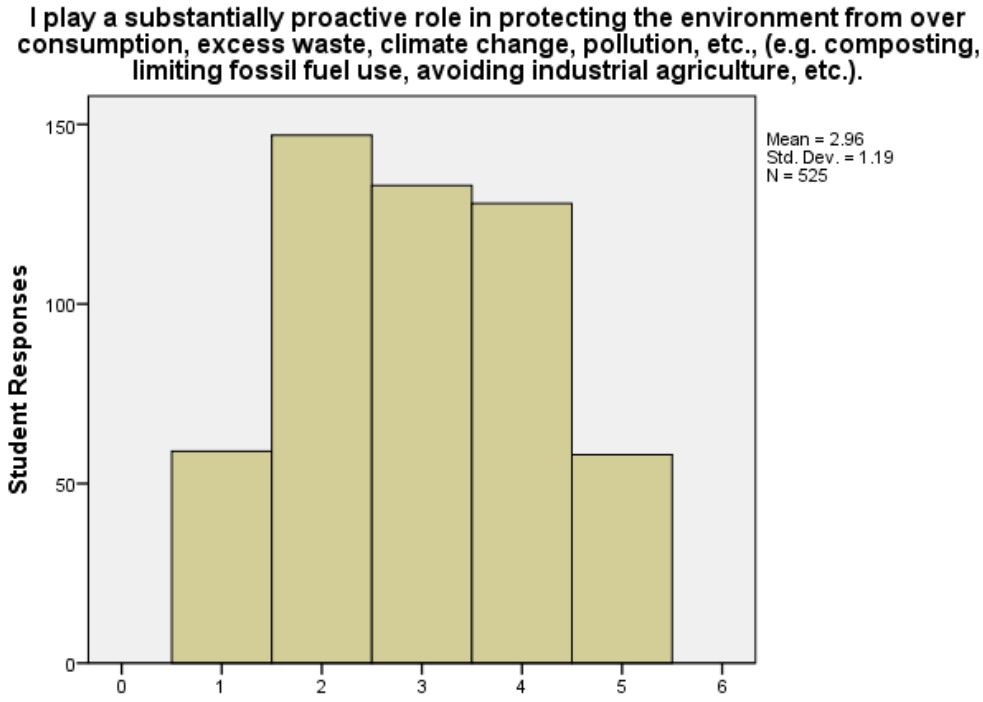


Figure 5.8. Lifestyle Questionnaire, Item 6, Student Responses
Note: X-Axes of histograms are not standardized.



Comparisons between male and female students in their responses to the lifestyle questionnaire were not statistically significant. Comparisons among students with different political affiliations and their responses to the lifestyle questionnaire also yielded no statistically significant information.

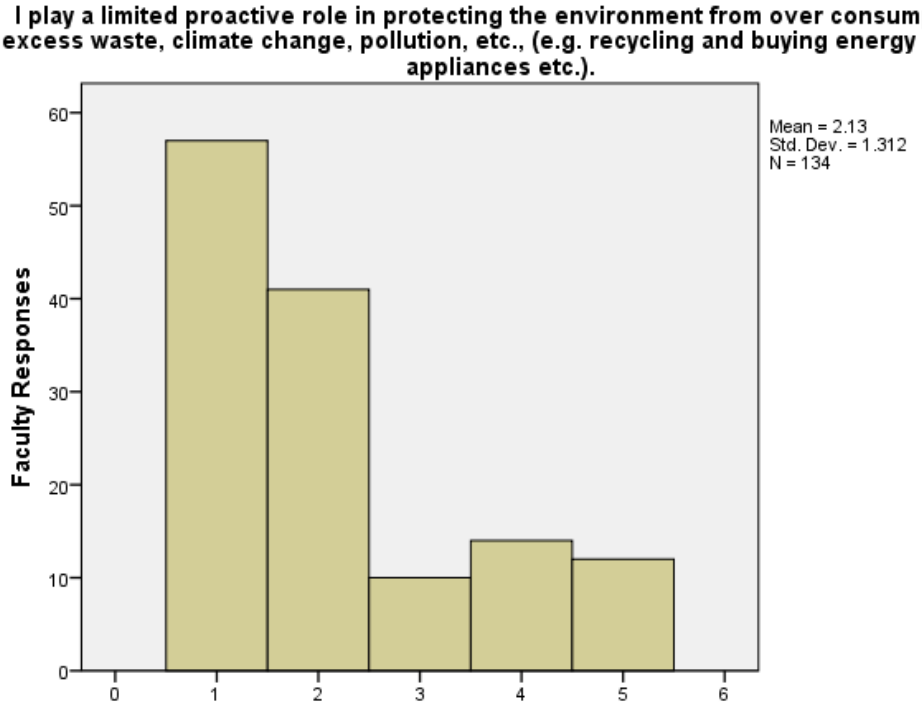
Faculty lifestyle responses.

Faculty displayed a similar pattern to students in the general analysis of their responses to the lifestyle questionnaire, they responded that they favor outdoor recreational activity and felt comfortable outdoors with low means (signifying strong agreement) corresponding with items 1 and 2—1.85 and 1.45 respectively. To reinforce this, faculty mean responses to items 3 and 4—the inverses of the above statements—were appropriately high (signifying strong disagreement) at 4.09 and 4.28 respectively.

In response to item 5, "*I play a limited proactive role in protecting the environment from over consumption, excess waste, climate change, pollution, etc., (e.g. recycling and buying energy saving appliances etc.),"* faculty responded with a mean of 2.13. While relatively low, this mean is much higher (and less pro-ecological) than to be expected, considering faculty's extremely low average mean in response to the Revised NEP questions of 1.66. **Figure 5.9** illustrates the full layout of faculty responses to this question.

In response to item 6, "*I play a substantially proactive role in protecting the environment from over consumption, excess waste, climate change, pollution, etc., (e.g. composting, limiting fossil fuel use, avoiding industrial agriculture, etc.),"* faculty responded with an even higher mean of 2.4. It is generally to be expected that an average

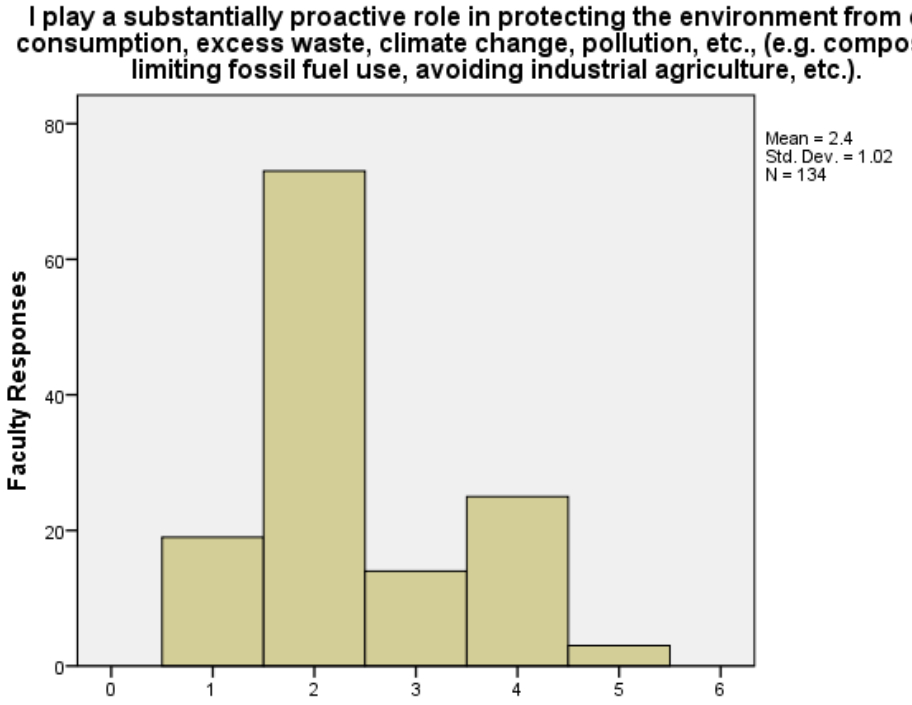
Figure 5.9. Lifestyle Questionnaire Item 5, Faculty Responses.
Note: X-axes of histograms are not standardized



question would be higher than that of item 5 of the lifestyle questionnaire, as to be "*substantially proactive,*" as the question defines it, requires much more effort and commitment in a daily routine. However, this mean is again much higher (and less pro-ecological) than to be expected, given faculty's strongly pro-ecological views in response to the Revised NEP questions. **Figure 5.10** shows faculty responses to this item.

Although the differences between female and male staff were slight, women were statistically significantly less likely to enjoy outdoor activities voluntarily than men, with respective means of 2.02 and 1.60. Women were also only slightly less likely than men to be comfortable outdoors, with respective means of 1.60 and 1.14. Additionally, female

Figure 5.10. Lifestyle Questionnaire Item 6, Faculty Response Histogram.
Note: X-Axes of histograms are not standardized.



faculty were also statistically significantly more likely to claim a limited proactive role in protecting their environment from overconsumption, with a mean of 1.96 versus the 2.48 mean of male faculty. However, whether or not female faculty felt they were substantially proactive in this endeavor, as opposed to their male counterparts, failed to achieve statistical significance.

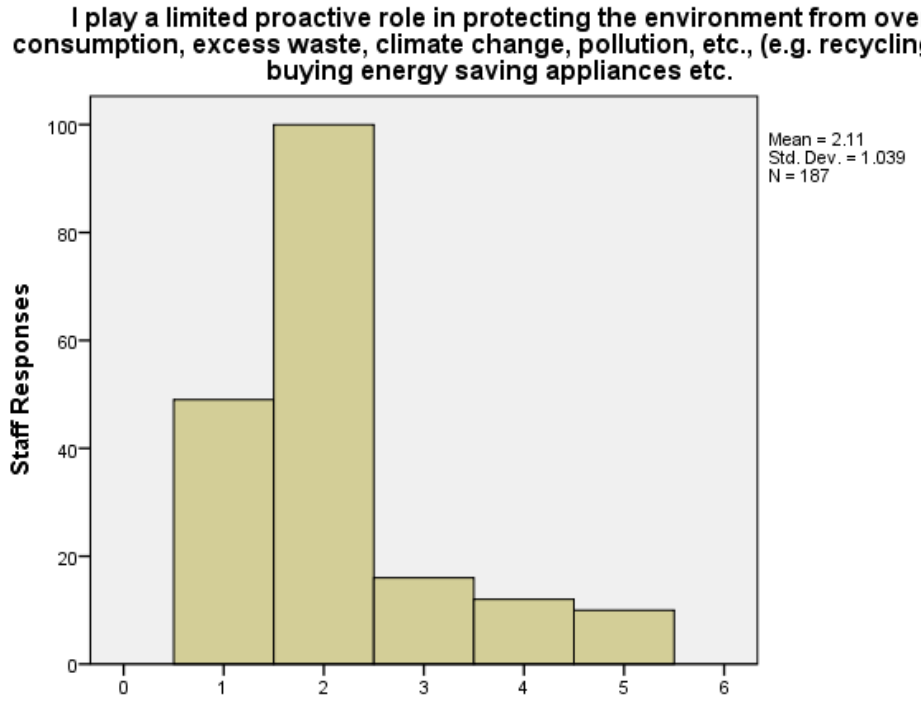
In terms of political affiliation, most comparisons were not statistically significant. Only 11 faculty members identified as conservative, so comparisons hold little weight in this particular category. However, faculty members identifying as liberal were statistically significantly more likely to claim they either play a limited (1.95) or substantial (2.21) role in protecting the environment versus those faculty members that identified as conservative (2.82, 3.63 respectively.)

Staff lifestyle responses.

Staff, in their responses to the lifestyle questionnaire, again followed in the trend set by other groups. Staff were more likely to report voluntarily participating in outdoor recreational activities, with a mean response to item 1 of 2.16. Staff were also more likely to report feeling comfortable outdoors, with a mean response to item 2 of 1.50. To affirm this analysis, staff responses to item 3 and 4, inverses of the aforementioned statements, were 3.61 and 4.15 respectively. In their responses to item 5, "*I play a limited proactive role in protecting the environment from over consumption, excess waste, climate change, pollution, etc., (e.g. recycling and buying energy saving appliances etc.),"* staff responded with a mean of 2.11. The histogram of this response can be seen in **Figure 5.11**.

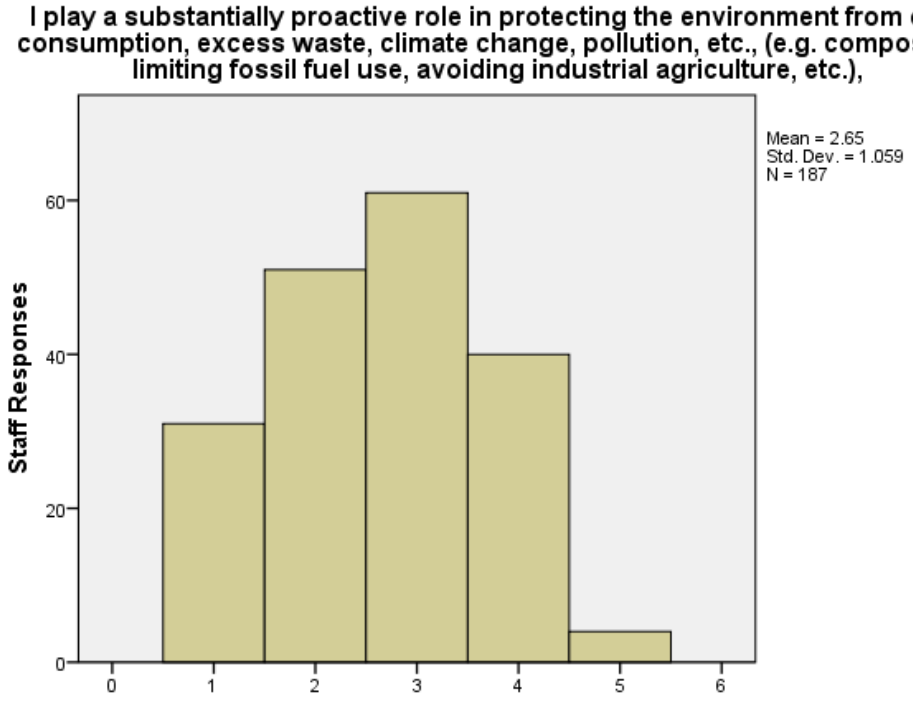
Figure 5.11 Lifestyle Questionnaire Item 5, Staff Responses

Note: X-Axes of histograms are not standardized.



In response to item 6, "*I play a substantially proactive role in protecting the environment from over consumption, excess waste, climate change, pollution, etc., (e.g. composting, limiting fossil fuel use, avoiding industrial agriculture, etc.),"* staff responded with a mean of 2.65. The histogram of this response can be seen in **Figure 5.12**.

Figure 5.12 Lifestyle Questionnaire Item 6, Staff Response Histogram.
Note: X-axes of histograms are not standardized.



Comparisons between male and female staff had no statistical significance, although female staff did respond with greater agreement to items 5 and 6 concerning limited and substantial proactivity. Comparisons among various political identifications of staff members were not generally statistically significant either, with the exception of item 6. Liberally-identifying staff members were in the strongest agreement with item 6,

"*I play a substantially proactive role in protecting the environment from over consumption, excess waste, climate change, pollution, etc., (e.g. composting, limiting fossil fuel use, avoiding industrial agriculture, etc.),"* with a mean of 2.22. Conservatives responded with a mean of 3.07, and moderates responded with a mean of 2.65. All staff comparisons made on item 6 in terms of political identification were highly statistically significant.

CHAPTER 6.

DISCUSSION AND CONCLUSION

Students, Faculty, and Staff: General Findings

Altogether, the University of Mississippi's average mean response was a 2.00 out of 5.00—moderately pro-ecological. Findings of the survey revealed that students were the least pro-ecological in their responses, whereas faculty were the most pro-ecological in their responses, with staff generally between students and faculty. This correlation could suggest that greater educational achievement increases sensitivity to environmental issues, including the issue of global climate change. This finding is not necessarily a surprise; in fact, it is one duplicated in the literature (Dunlap et. al., 2000).

However, it is surprising to see that with a moderately pro-ecological general response and an especially pro-ecological response among faculty members—self-reported participation in sustainability was relatively unsubstantial. When respondents were asked to report on their commitment to sustainability in their daily routines, responses were varied and inconsistent with pro-ecological mindsets (see **Figures 5.5 and 5.6** in the previous chapter). It is not unusual for the Revised NEP to function poorly as a predictor for environmental behaviors. In fact, the scale's authors address this at length, concluding that neither the Revised NEP nor the original Environmental Paradigm

Scale were meant to function as predictors for environmental behaviors (Dunlap, R.E. 2008).

While the Revised NEP is solely a tool for the examination of environmental *attitudes*, its inability to predict *behaviors* is not an excuse for the apparent disconnect between the two. It is possible that what is called a "value-action gap" is present at the University of Mississippi, at least among the faculty population. A value-action gap refers to the apparent discontinuity that can occur when an individual's choices are not consistent with their expressed beliefs (Blake, 1999). Someone who exhibits a value-action gap colloquially "talks the talk" but does not "walk the walk." The term is often involved in discussion of environmental behaviors and attitudes, as the value-action gap often manifests itself in the context of environmental issues (Blake, 1999). Generally, behavior should be informed by attitudes towards certain issues; however, the "opposite often seems to be the case with regard to environmental attitudes and values" (Blake, 1999). In responding pro-ecologically in terms of attitude, but in disproportionately low agreement with the sustainability portion of the lifestyle questionnaire, faculty at the University of Mississippi are exhibiting a value-action gap, by Blake's definition of the concept (1999).

According to the literature, three barriers exist to acting upon environmental concern (Blake, 1999; Jackson, 2005). First, people may identify themselves as "the wrong type of person" to address the ethical responsibilities that come with environmental sustainability, i.e. a "divorce of position" (Blake, 1999). Another barrier that could prevent those who are concerned about the environment from acting upon that concern is the inability to internalize responsibility for environmental degradation; for

example, and individual's belief that her/his personal behaviors are insufficient to cause damage on their own could prevent them from seeing themselves as part of the bigger problem (Blake, 1999). People may also be disincentivized to act upon environmental concern by a distrust of government or environmental organizations (Jackson, 2005). It may be that practical constraints play the largest role in discouraging environmentally concerned individuals from acting upon their beliefs or intentions, i.e. insufficient time, financial resources, space, and availability of infrastructure to support environmentally responsible behaviors (Jackson, 2005).

Members of the University of Mississippi community, particularly faculty, may lack the support or resources to address sustainability more completely in their daily behaviors and choices. They may also very well not see themselves as contributing significantly to environmental degradation. They may not appreciate a strong sense of *personal* responsibility in addressing environmental issues, but instead identify that responsibility as an institutional one.

Community Trends

The stronger presence of environmentalism among women versus men.

As displayed in the previous chapter, women were more pro-ecological than men on all statistically significant comparisons, whether students, faculty, or staff. All three categories (faculty, staff, and students) show greater pro-ecological views among women versus men in response to the statement "*Humans have the right to modify the natural environment to suit their needs,"* and the statement "*Plants and animals have as much right as humans to exist."* These are two out of the three statements that constitute the

"anti-anthropocentric" facet of the Revised NEP scale. The third statement, "*Humans were meant to rule over the rest of nature,"* received more pro-ecological responses from women than men, but this comparison was only significant among staff members. This suggests that women were more sensitive to the issue of anthropocentrism in the Revised NEP.

Greater pro-ecological response among women versus men is not unusual in terms of instances where the Revised NEP is utilized (Dunlap, et. al., 2000; Harraway, et. al.,2012; Zelezny et. al., 2000). Greater environmental concern among women is a correlation also found in studies that do not utilize the Revised NEP, but instead employ alternate measures of environmental attitudes (Nesbit et. al., 2009; Zelezny et. al., 2000)

A relationship between women and environmental issues and sustainability exists; however it is unclear what the nature of this relationship is, how it is caused, or *if* the relationship could even be described as more than just a coincidence.

It is interesting to also note the tendency to feminize nature in literature and popular culture (i.e. "Mother Nature"). In this tendency, nature (encapsulating wildness, savagery, mystery) is aligned with femininity, while society (reason, structure, intellect) is aligned with masculinity. A prime example can be found in *Deliverance,* the iconic American novel written by James Dickey (turned film), which prominently featured male protagonists entering an overtly feminized natural landscape in a venture to *prove* themselves and assert their manhood. While this can be troubling in terms of thematic subjugation of women *and* nature, it is possible that this tendency has influenced the perception of the relationship between gender and environmental beliefs (and vice versa).

It may be a sociological construct—the effect of gender roles, perhaps—that has created this apparent divergence between women and men at the University of Mississippi. Regardless of the cause for the difference in environmental beliefs between women and men, it has *real* implications on the sustainability movement at the university. While comparisons of sustainable behaviors between men and women were not significant in any of the three categories, it is clear that women play a large role in sustainable leadership within the university community.

The politicization of environmental beliefs.

Across comparisons of political affiliation and environmental beliefs and behaviors, conservatives were statistically significantly less concerned and less motivated to act upon environmental issues and imperatives for sustainability at the University of Mississippi. This characterization of campus culture towards environmentalism mirrors that of other Revised NEP studies (Dunlap et. al., 2000). It also mirrors closely that of the nation (Leiserowitz et. al., 2010). What has caused the increasing politicization of environmentalism and environmental issues?

For better or worse, environmentalism has been aligned with political liberalism from early on in the movement. Much of the early environmentalism seen during the 1960s is thought to be the product of the countercultural movement of that decade. The Clean Air and Water Acts of the 1960s and 1970s are generally thought to have originated under Democratic leadership, particularly President Lyndon B. Johnson's administration, although the Environmental Protection Agency was created by President Richard Nixon (a Republican). In more recent memory (2006), Al Gore's attempts to publicize the emerging issue of global warming through the documentary *An*

Inconvenient Truth immediately linked concern for global climate change with his politically liberal policies as Vice President under President Bill Clinton. Furthermore, policies aimed at lessening public impact are often viewed as more consistent with liberal ideologies—"big government," regulatory measures of industry.

An especially salient example of such a policy would be the controversial proposal for the construction of the Keystone Pipeline XL. Legislative support for the proposal is largely conservative, citing economic benefits as a driving justification for the construction of the pipeline. However, many Democrats in the Legislature have consistently opposed the pipeline, citing tremendous environmental impacts as major issues with the proposal. An amendment to the proposal, drafted by Senator Bernie Sanders, required a vote on the legitimacy of climate change, with only one opponent in the Senate—Senator Roger Wicker, Republican, of Mississippi. The amendment is evidence of a longer standing, pervasive controversy over the over the authenticity of climate change science.

Conservative political ideology, while not the *only* political ideology represented at the University of Mississippi, is a powerful influence over campus culture. For instance, if one were to take a walk around campus, they would see many prominent buildings and programs named after Republican leaders—the *Trent Lott* Leadership Institute, the *Haley Barbour* Center for Manufacturing Excellence, etc. As the results of this study suggests, the continued politicization of environmentalism is a significant obstacle to campus sustainability. The changes of campus perceptions towards global climate change perceived by Assistant Director of the Office of Sustainability, Anne McCauley, as stated in Chapter 2, suggest that global climate change is growing in

legitimacy among members of the university community. This may serve to neutralize obstacles presented by political affiliation, but this is yet to be definitively illustrated.

Outdoor recreation as a priority of university community.

Preference for outdoor recreational activity and comfort while outdoors was unanimously expressed across student, faculty, and staff categories. While in some instances, women were *slightly* less likely to enjoy outdoor recreational activities or feel comfortable outdoors, these instances did not present large enough differences to derive a real argument against this clear and definitive trend of campus preference. The prevalence of hunting, fishing, and other outdoor recreational activities is a well-established perception of the South; this data only confirms this perception.

Historically, hunting and fishing have often been decried as a foil to environmental concern and progress. John Muir, one of the great intellectual predecessors of American environmentalism, despised hunting as a purely anthropocentric activity and wrote extensively upon it in many of his books, particularly *A Thousand Mile Walk to the Gulf* (Muir, 1867). However, another predecessor of American environmental thought (specifically that of the South), John James Audubon was simultaneously an avid hunter and naturalist; his experiences while hunting and use of wildlife carcasses for study and illustration provided much of the baseline for his environmental writings (Audubon, 1999). Both philosophies are valid approaches towards hunting and fishing and have served purposes in the service of promoting environmental conservation. Furthermore, wildlife management has served an important function in public conservation; the sale of fishing and hunting licenses, tags, and stamps

is the primary source of funding for *many* state wildlife conservation efforts, according to the U. S. Fish and Wildlife Service (2015).

If many of the members of the University of Mississippi community have existing relationships with the natural environment that exist through hunting, fishing, and other outdoor recreational activities, potential interest in conservation through sustainability may naturally follow. Many organizations and companies already work within this particular framework of sustainability. Consider the sustainability and conservation initiatives of companies like Ducks Unlimited, Patagonia, the North Face, and others, who emphasize sustainability and environmental literacy as part of their corporate philosophies. Ducks Unlimited is an international nonprofit organization that works to promote conservation of wetlands and waterfowl, but it does so through the very perspective of a waterfowling enthusiast. Patagonia and the North Face are two outdoor recreational clothing companies with substantial sustainability initiatives and a fully integrated philosophy of corporate responsibility. These and many other organizations have materialized the connection between outdoor recreational activities, such as hunting and fishing, and sustainability. These organizations also enjoy a large presence on the University of Mississippi campus, as many students use their products.

Final Conclusions

The University of Mississippi resembles a microcosm for issues in environmental attitudes and behaviors seen on a national and international level. The gendered and politicized nature of environmental concern that is displayed in this study is also present on a larger scale. It is possible to resolve issues of environmental concern and

sustainability on the campus level through this greater understanding, and may also potentially prove useful in translation of solutions to a national scale. Alternative pathways *do* exist for targeting new audiences to promote sustainability. A promising avenue would be to explore the utilization of interest in outdoor recreation to communicate the importance of conservation, and thus, sustainability.

CHAPTER 7.

RECOMMENDATIONS

In terms of environmental sustainability, *understanding* the attitudinal context our community works within is simply not enough. It is imperative that actions are also taken in response to this greater understanding. After drawing conclusions from the completion of this research, several recommendations can be made:

A need for further research.

The project of understanding environmental attitudes and behaviors of members of the University of Mississippi community is far from completed by the execution of this study. This study merely highlights new, important questions for further exploration. Furthermore, as addressed in Chapter 3: Research Design, this analysis is limited to statistical significance testing. Statistical significance testing is, ultimately, only useful in determining the probability that differences observed among groups are not due to random chance. In future studies, more nuanced methods such as ANOVA, cross-tabulations, such as Kramer's V, should be implemented to provide a more powerful analysis.

Substantially more research is required to fulfill this task, particularly into the attitudes and behaviors of minority students. Although the survey was distributed to all members of the University of Mississippi community, and distributed additionally to

organizations representing minorities on campus, an insufficient number of complete responses from such individuals rendered the study handicapped in this particular area. In future endeavors to study sustainability and environmentalism on the University of Mississippi campus, these minority attitudes and behaviors should be addressed as they are not currently understood.

It would also be helpful in the future to address the differentiation among staff members at the University of Mississippi. Staff responses were generally in between those of students and faculty in terms of their means, but there was a high level of variance in their responses. In response to some statements, staff would align with students, and others, with faculty. This could be due to the many different *kinds* of staff at the University of Mississippi. Staff encapsulate a broad category, with several different levels and statuses. This variety could explain some of the variance in staff responses, but an additional study would be necessary to confirm this.

Furthermore, the survey was originally designed with the intent that later, a qualitative element would be incorporated into the study to explain all quantitative results. Due to scheduling and logistical complications, the proposed qualitative portion of the study was planned but never carried through. If future research endeavors choose to examine environmental attitudes and behaviors at the University of Mississippi qualitatively, focus groups would be an appropriate method of study. Focus groups build upon the information about observed trends from this study, allowing for vital contextualization to this study's findings.

If focus groups were conducted in the future, they should examine differences between males and females, as well as different political affiliations, among the three

groups: students, faculty, and staff. Because students are such a large constituency at the University of Mississippi, it may be helpful to break this group up into two separate focus groups: freshmen, to examine the entering and preexisting values of students, and student leaders, who would be able to synthesize insights into cause and effect of particular attitudes due to their familiarity with campus culture and politics. All of the focus groups should directly address the apparent value-action gap, focusing specifically upon faculty. A faculty focus group could also provide helpful information about the responsibility of the teaching staff at an institution of higher education to inform the community about sustainability and environmental issues, if there is such a responsibility. Finally, focus groups would provide valuable information about the potential pathways between interest in outdoor recreation and sustainability, and how these connections can be further solidified.

Outreach to new audiences.

The list of sustainability proponents at the University of Mississippi is growing; however, this growth is slow. Sustainability should be promoted to new audiences using the information gathered in this study. For example, ample opportunity exists to market sustainability and interest in environmentalism through the natural nexus of outdoor recreation. Ole Miss Outdoors and the Turner Center would be obvious partnerships in this endeavor. Also, student hunting and fishing clubs could provide possible new audiences and partnerships to the Office of Sustainability. Messages marketed to Greek life at the University of Mississippi, which includes many students who are interested in hunting and fishing, should address some conservation component relating back to outdoor recreation.

Overcoming the barrier of politicizing environmental issues.

In order to promote sustainability at the University of Mississippi, the politicization of environmentalism *must be* addressed. This could come through a greater educational component, perhaps in conjunction with the Departments of Public Policy and Political Science. Student political groups need to be engaged in the discourse on sustainability (i.e. Ole Miss Republicans, Ole Miss Democrats, the Alexander Hamilton Society, etc.). Those hoping to address this barrier should be prepared for defensive, and in some instances, aggressive responses. However, it is not impossible to engage more politically conservative students, faculty, and staff in environmental issues. These issues simply need to be addressed within a framework more suitable for these audiences.

A stronger emphasis on environmental curriculum.

Finally, it appears that the most substantial recommendation to impact change on this campus also lies within the University of Mississippi's educational mission. After examining the great difference between the environmental attitudes of faculty versus students and staff, it is suggested that a correlation exists between educational attainment and environmental awareness and interest in sustainability. As stated previously, this is a trend that is supported by the literature (Dunlap et. al., 2009).

Those with greater educational attainment may have more exposure to the literature on climate change, or they may be more aware of environmental issues. It may also be the result of age—it is possible that faculty simply have had more experience with sustainability than students. Regardless, students stand to benefit from a greater emphasis on sustainability and environmental issues in their regular curriculum. There are ample opportunities in the first year introductory classes (EDHE, Chancellor's

Leadership, Honors 101 or 102, etc.) for discussion of environmental issues and sustainability. This information could also be relayed in the form of a freshman science component. The Office of Sustainability needs to play a prominent role in reaching entering freshmen, whether through educational outreach, or in partnership with the Office of Freshman Year Experience.

Furthermore, the University of Mississippi needs to offer a substantial option for those wishing to pursue a degree in environmental studies. This achieves multiple beneficial outcomes: the further legitimization of environmental issues among a potentially skeptical audience, an increase of environmental awareness and exposure in the university community, and a potential pull of environmentally-oriented students to the university. Currently, students may pursue a minor in environmental studies. This minor should be supported and bolstered by the University of Mississippi, and options to expand the minor into a major should be explored.

A Call to Action

As members of this community, students, faculty, and staff agree to live by the Creed, which is as follows:

> *The University of Mississippi is a community of learning dedicated to nurturing excellence in intellectual inquiry and personal character in an open and diverse environment. As a voluntary member of this community:*
>
> *I believe in respect for the dignity of each person*
>
> *I believe in fairness and civility*
>
> *I believe in personal and professional integrity*

I believe in academic honesty

I believe in academic freedom

I believe in good stewardship of our resources

I pledge to uphold these values and encourage others to follow my example.

As members of this community, we are committed to good stewardship of our resources. But even beyond this, we are committed to respect for others, and to integrity in our academic and professional endeavors. Environmental sustainability requires that we be cognizant of the effects our actions have upon those beyond our institution, our community, and ourselves. Environmental sustainability aligns closely with our community values, and can be easily incorporated into our mission as an institution of higher learning.

APPENDIX.

Item 1. Survey Methodology text.

ENVIRONMENTAL ATTITUDES SURVEY

Pt. I

Instructions: *In response to the following questions, please select the option which best applies.*

1. Are you 18 years of age or older?

Yes **No**

2. Please select your affiliation to the University of Mississippi.

Student **Faculty** **Staff** **No affiliation/affiliation not listed**

3. What is your gender?

Male **Female** **Other** **Prefer not to respond**

4. If you are a student, what is your classification?

Freshman **Sophomore** **Junior** **Senior** **Graduate or Professional School** **N/A**

5. What is your major?

_____

6. Select the choice that best represents your political ideology:

Conservative **Moderate** **Liberal** **Unsure/Undecided**

7. How important is religious belief or spirituality to you?

Very Important **Somewhat Important** **Unsure** **Somewhat Unimportant** **Not Important**

8. If you associate with a particular faith system, please indicate it below.

_____.

9. How would you describe yourself? (Select all that apply)

Native American/American Indian

Asian

Black/African American

Hispanic/Latino

White/Caucasian

Pacific Islander

Other

Pt. II

Instructions: *In response to the following statements, select to what extent you may agree or disagree. If you do not know if you agree or disagree with the statement, select "unsure."*

1. We are approaching the limit of the number of people the earth can support.

Strongly Agree Moderately Agree Unsure Moderately Disagree Strongly Disagree

2. Humans have the right to modify the natural environment to suit their needs.

Strongly Agree Moderately Agree Unsure Moderately Disagree Strongly Disagree

3. When humans interfere with nature it often produces disastrous consequences.

Strongly Agree Moderately Agree Unsure Moderately Disagree Strongly Disagree

4. Human ingenuity will ensure that we do not make the earth unlivable.

Strongly Agree Moderately Agree Unsure Moderately Disagree Strongly Disagree

5. Humans are severely abusing the environment.

Strongly Agree Moderately Agree Unsure Moderately Disagree Strongly Disagree

6. The earth has plenty of natural resources if we just learn how to develop them.

Strongly Agree Moderately Agree Unsure Moderately Disagree Strongly Disagree

7. Plants and animals have as much right as humans to exist.

Strongly Agree Moderately Agree Unsure Moderately Disagree Strongly Disagree

8. The balance of nature is strong enough to cope with the impacts of modern industrial nations.

Strongly Agree Moderately Agree Unsure Moderately Disagree Strongly Disagree

9. Despite their special abilities humans are still subject to the laws of nature.

Strongly Agree Moderately Agree Unsure Moderately Disagree Strongly Disagree

10. The so-called "ecological crisis" facing humankind has been greatly exaggerated.

Strongly Agree Moderately Agree Unsure Moderately Disagree Strongly Disagree

11. The earth is like a spaceship with very limited room and resources.

Strongly Agree Moderately Agree Unsure Moderately Disagree Strongly Disagree

12. Humans are meant to rule over the rest of nature.

Strongly Agree Moderately Agree Unsure Moderately Disagree Strongly Disagree

13. The balance of nature is very delicate and easily upset.

Strongly Agree Moderately Agree Unsure Moderately Disagree Strongly Disagree

14. Humans will eventually learn enough about how nature works to be able to control it.

Strongly Agree Moderately Agree Unsure Moderately Disagree Strongly Disagree

15. If things continue on their present course we will soon experience a major ecological catastrophe.

Strongly Agree Moderately Agree Unsure Moderately Disagree Strongly Disagree

Pt. III

Instructions: *In response to the following statements, select to what extent you may agree or disagree. If you do not know if you agree or disagree with the statement, circle "unsure."*

1. I voluntarily participate in outdoor recreational activities (camping, hunting, fishing, hiking, boating, etc.) often.
   Strongly Agree Moderately Agree Unsure Moderately Disagree Strongly Disagree

2. I enjoy being outdoors.
   Strongly Agree Moderately Agree Unsure Moderately Disagree Strongly Disagree

3. Typically, I do not voluntarily engage in outdoor recreational activities (camping, hunting, fishing, hiking, boating, etc.).
   Strongly Agree Moderately Agree Unsure Moderately Disagree Strongly Disagree

4. The thought of being outdoors, disconnected from civilization, is uncomfortable to me.
   Strongly Agree Moderately Agree Unsure Moderately Disagree Strongly Disagree

5. I play a limited proactive role in protecting the environment from over consumption, excess waste, climate change, pollution, etc., (e.g. recycling and buying energy saving appliances etc.).
   Strongly Agree Moderately Agree Unsure Moderately Disagree Strongly Disagree

6. I play a substantially proactive role in protecting the environment from over consumption, excess waste, climate change, pollution, etc., (e.g. composting, limiting fossil fuel use, avoiding industrial agriculture, etc.).
   Strongly Agree Moderately Agree Unsure Moderately Disagree Strongly Disagree

Item 2. Recruitment text.

Hello,

You are invited to participate in the thesis research of Sally McDonnell Barksdale Honors College student, Kendall McDonald. Kendall is conducting her senior thesis on campus attitudes towards environmentalism and sustainability. Please take the following **15 minute** survey. It is completely anonymous, and your answers will be kept confidential. Please click on the link below to participate in this research study.

(Link)

Your participation in this survey is vital and appreciated. Thank you in advance.

This study has been reviewed by The University of Mississippi's Institutional Review Board (IRB). If you have any questions, concerns, or reports regarding your rights as a participant of research, please contact the IRB at (662) 915-7482 or irb@olemiss.edu.

Item 3. Informed Consent Form.

The University of Mississippi:
The Sally McDonnell Barksdale Honors College (SMBHC)

Kendall McDonald
Project Title:
Red, Blue, and Green: Determining Environmental Orientation on the University of Mississippi Campus

Purpose of the Research
The key purpose of this research is to shed light on the common perceptions held by University of Mississippi students towards environmentalism, practices of sustainability, and relationship towards their environment. The answers provided to this survey will lay the foundation for my undergraduate honor's thesis.

Your Participation is Voluntary
Please understand that your participation in this research is entirely voluntary. You may choose whether or not to participate in this survey. You may opt out of the survey at any point until your answers are submitted after the final question.

Procedures
Once the survey begins, you will be led through a series of questions. Answer these questions as honestly and completely as possible.

Duration of Survey
Approx. 15 minutes.

Risks
There are no risks associated with the completion of this survey. The information gathered will be completely anonymous and will not link back to you in any way. You may opt out of answering any of the questions with which you may not feel comfortable.

Benefits
You are unlikely to benefit directly from this survey, but the University of Mississippi community may potentially benefit from the greater understanding it hopes to attain.

Confidentiality
Your answers to this survey will be kept entirely anonymous.

Item 4. IRB Approval email.

irb@olemiss.edu <irb@olemiss.edu> 10/20/14

to me, DAVID, wchen3

Ms. McDonald:

This is to inform you that your application to conduct research with human participants, "
Red, Blue, and Green: Determining Environmental Orientation on the University o fMississippi Campus" (Protocol #15x-074), has been approved as Exempt under 45 CFR 46.101(b)(#2).

Please remember that all of The University of Mississippi's human participant research activities, regardless of whether the research is subject to federal regulations, must be guided by the ethical principles in The Belmont Report: Ethical Principles and Guidelines for the Protection of Human Subjects of Research.

It is especially important for you to keep these points in mind:

- You must protect the rights and welfare of human research participants.
- Any changes to your approved protocol must be reviewed and approved before initiating those changes.
- You must report promptly to the IRB any injuries or other unanticipated problems involving risks to participants or others.

If you have any questions, please feel free to contact the IRB at irb@olemiss.edu.

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